

ETC

# INVENTORS

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200470  
File 347:JAPIO Nov 1976-2004/Jun(Updated 041004)  
File 348:EUROPEAN PATENTS 1978-2004/Oct W04  
File 349:PCT FULLTEXT 1979-2002/UB=20041028,UT=20041021

Set	Items	Description
S1	5	AU='ZELINSKI W J' OR AU='ZELINSKI WILLIAM J' OR AU='ZELINSKI WILLIAM J JR'
S2	8	AU='TALLACKSON T J' OR AU='TALLACKSON T K' OR AU='TALLACKSON THOMAS J' OR AU='TALLACKSON THOMAS K'
S3	5	S1 AND S2
S4	3	S1:S2 NOT S3 [not relevant]

3/7/1 (Item 1 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
015228458 \*\*Image available\*\*  
WPI Acc No: 2003-289371/200328

*Application* Sanitary cutting method for potatoes to be planted, involves supplying water jets into chamber, to traverse path of potato led into chamber, such that potato are cut into planting portions

Patent Assignee: TALLACKSON T K (TALL-I); ZELINSKI W J (ZELI-I)

Inventor: TALLACKSON T K ; ZELINSKI W J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 20030037649	A1	20030227	US 2001935335	A	20010821	200328 B

Priority Applications (No Type Date): US 2001935335 A 20010821

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20030037649	A1	12	B26F-003/00		

Abstract (Basic): US 20030037649 A1

NOVELTY - The method involves sizing a potato (98), before leading the potato into a chamber. Water jets (100,102) are supplied into the chamber, to traverse the path of the potato within the chamber, such that the potato are cut into planting portions.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for the cut potato.

USE - For potatoes to be planted.

ADVANTAGE - Prevents transfer of bacteria and other pathogens between potatoes during or after cutting process. Allows application to existing potato cutting and planting machine.

DESCRIPTION OF DRAWING(S) - The figure shows the front view of the sanitary cutting process.

Potato (98)

Water jets (100,102)

pp; 12 DwgNo 7/14

Derwent Class: P62

International Patent Class (Main): B26F-003/00

3/7/2 (Item 2 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
(c) 2004 Thomson Derwent. All rts. reserv.  
014437025 \*\*Image available\*\*  
WPI Acc No: 2002-257728/200230

Disease preventing method involves sizing seed potatoes by moving the potatoes through the water jet and cutting

Patent Assignee: TALLACKSON T K (TALL-I); ZELINSKI W J (ZELI-I)

Inventor: TALLACKSON T K ; ZELINSKI W J

Number of Countries: 097 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200215667	A2	20020228	WO 2001US26221	A	20010821	200230 B
AU 200186622	A	20020304	AU 200186622	A	20010821	200247
EP 1311149	A2	20030521	EP 2001966080	A	20010821	200334
			WO 2001US26221	A	20010821	

Priority Applications (No Type Date): US 2000642876 A 20000821

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200215667 A2 E 30 A01C-009/00

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA  
CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN  
IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ  
PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR  
IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200186622 A A01C-009/00 Based on patent WO 200215667

EP 1311149 A2 E A01C-001/00 Based on patent WO 200215667

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI TR

Abstract (Basic): WO 200215667 A2

NOVELTY - The disease preventing method comprises of sizing seed potatoes (98) for planting, supplying seed potatoes for cutting into seed, supplying a chamber with a water jet (50) passing across the chamber, moving the potatoes through the water jet and cutting the seed potatoes. The spent water jet is directed from the jet by a stream collector tube.

USE - For cutting potatoes

ADVANTAGE - Prevents the spread of pathogens or other bacteria..

DESCRIPTION OF DRAWING(S) - The drawing shows the front elevation detail view of the potato.

Water jet (50)

Potatoes. (98)

pp; 30 DwgNo 7/14

Derwent Class: P11

International Patent Class (Main): A01C-001/00; A01C-009/00

3/7/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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014244948 \*\*Image available\*\*

WPI Acc No: 2002-065648/200209

Cutting seed potatoes for planting uses laser beams which pass across chamber for cutting and cauterizing seed potato

Patent Assignee: TALLACKSON T K (TALL-I); ZELINSKI W J (ZELI-I)

Inventor: TALLACKSON T K ; ZELINSKI W J

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6321484	B1	20011127	US 99365981	A	19990802	200209 B

Priority Applications (No Type Date): US 99365981 A 19990802

Had

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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US 6321484	B1		9	A23N-015/02	
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Abstract (Basic): US 6321484 B1

NOVELTY - Seed potatoes are cut by:

- (a) sizing seed potatoes using rollers (18);
- (b) supplying chambers, each having laser beam(s) (20) passing across the chamber;
- (c) moving the sized seed potatoes to the appropriate chamber;
- (d) passing the sized seed potato through the laser beam; and
- (e) cutting and cauterizing the seed potato with laser beam.

USE - For planting.

ADVANTAGE - The invention provides the cauterization of the cut that destroys pathogens contained within individual potatoes and ensures that other potatoes will not be infected. This increases the ultimate yield of the crop being planted and the profits made on the crop.

DESCRIPTION OF DRAWING(S) - The figure is a perspective view of a seed potato cutting machine.

Rollers (18)

Laser beam (20)

Fan (62)

pp; 9 DwgNo 1/10

Derwent Class: D14

International Patent Class (Main): A23N-015/02

**NON-PATENT LITERATURE**

File 34:SciSearch(R) Cited Ref Sci 1990-2004/Oct W4  
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
File 10:AGRICOLA 70-2004/Sep  
File 51:Food Sci.&Tech.Abs 1969-2004/Nov W1  
File 52:TSCA Chemical Substances Inventory 2003/OCT,  
File 79:Foods Adlibra(TM) 1974-2002/Apr  
File 203:AGRIS 1974-2004/Sep

Ref	Items	Index-term
E1	0	*AU=ZELINSKI W
E2	1	AU=ZELINSKI Z
E3	1	AU=ZELINSKI-WOOTEN B
E12	1	AU=ZELINSKI, T.
E13	1	AU=ZELINSKI, T. W.
E14	3	AU=ZELINSKI, Z.

Ref	Items	Index-term
E1	0	*AU=TALLACKSON T
E2	1	AU=TALLADA

E1	0	*AU=TALLACKSON
E2	1	AU=TALLADA

File 155:MEDLINE(R) 1951-2004/Oct W5  
File 5:Biosis Previews(R) 1969-2004/Oct W4  
File 73:EMBASE 1974-2004/Oct W4

Set	Items	Description
S1	4	AU='ZELINSKI W' OR AU='ZELINSKI WILLIAM JOHN JR'
S2	2	AU='TALLACKSON T K' OR AU='TALLACKSON THOMAS KEITH'
S3	5	S1:S2

3/7/4 (Item 1 from file: 5)

DIALOG(R)File 5:Biosis Previews(R)

(c) 2004 BIOSIS. All rts. reserv.

0013478914 BIOSIS NO.: 200200072425

Laser operated seed potato cutter

AUTHOR: Zelinski William John Jr (Reprint); Tallackson Thomas Keith

AUTHOR ADDRESS: P.O. Box 377, Plover, WI, 54437, USA\*\*USA

JOURNAL: Official Gazette of the United States Patent and Trademark Office

Patents 1252 (4): Nov. 27, 2001 2001

MEDIUM: e-file

ISSN: 0098-1133

DOCUMENT TYPE: Patent

RECORD TYPE: Abstract

LANGUAGE: English

ABSTRACT: A method of cutting seed potatoes prior to their planting is provided in which a laser beam is employed to slice the potatoes into the desired sized pieces. The present invention employs a plurality of laser cutting tubes and/or a multiple laser beam horizontal cutting areas which hold laser beam generating systems made up of laser beam sources that project the laser beams through the center of the cutting tubes or the cutting area and laser energy absorbers which contains the laser energy not used in the cutting process within the confines of the body of the invention. The laser beams bisect the cutting areas and as a potatoes pass through it the laser beams effectively cut the potato into the

desired size before it leaves the body of the present invention. Additionally, the use of a laser to cut seed potatoes prior to their planting also cauterizes the cut surfaces of the potatoes which ensures that any diseases contained within an individual seed potato will not be passed to additional potatoes during the cutting process.

File 155:MEDLINE(R) 1951-2004/Oct W5  
 File 5:Biosis Previews(R) 1969-2004/Oct W4  
 File 73:EMBASE 1974-2004/Oct W4  
 File 34:SciSearch(R) Cited Ref Sci 1990-2004/Oct W4  
 File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec  
 File 94:JICST-EPlus 1985-2004/Oct W1  
 File 95:TEME-Technology & Management 1989-2004/Jun W1  
 File 99:Wilson Appl. Sci & Tech Abs 1983-2004/Sep  
 File 144:Pascal 1973-2004/Oct W4  
 File 35:Dissertation Abs Online 1861-2004/Oct  
 File 65:Inside Conferences 1993-2004/Oct W5  
 File 71:ELSEVIER BIOBASE 1994-2004/Oct W4  
 File 143:Biol. & Agric. Index 1983-2004/Aug  
 File 315:ChemEng & Biotec Abs 1970-2004/Oct  
 File 358:Current BioTech Abs 1983-2004/Oct  
 File 54:FOODLINE(R): Market Sight 1979-2004/Nov 01  
 File 79:Foods Adlibra(TM) 1974-2002/Apr  
 File 285:BioBusiness(R) 1985-1998/Aug W1  
 File 6:NTIS 1964-2004/Oct W4  
 File 50:CAB Abstracts 1972-2004/Sep  
 File 51:Food Sci.&Tech.Abs 1969-2004/Nov W1  
 File 53:FOODLINE(R): Science Sight 1972-2004/Nov 03  
 File 203:AGRIS 1974-2004/Sep

Set	Items	Description
S1	10214	<b>WATERJET? ? OR WATER()JET? ?</b>
S2	86	<b>HIGH() PRESSURE() STREAM???</b>
S3	7702923	<b>CHEMICAL? ?</b>
S4	570376	<b>ADDITIVE? ?</b>
S5	7022806	<b>INFECT? OR PATHOGEN?</b>
S6	1192481	<b>CUT OR CUTS OR CUTTING OR SLICE? ? OR SLICING OR SPLIT????</b>
S7	318151	<b>POTATO?</b>
S8	1484846	<b>VEGETABLE? OR FRUIT OR FRUITS</b>
S9	565996	<b>MEAT OR MEATS</b>
S10	23	S1:S2 AND S7
S11	0	S3:S5 AND S10
S12	14	RD S10 (unique items)
<b>S13</b>	<b>14</b>	<b>Sort S12/ALL/PY,A</b>
S14	15	S1:S2 AND S3:S5 AND S8:S9
S15	15	S14 NOT S10
S16	14	RD (unique items)
S17	14	Sort S16/ALL/PY,A
<b>S18</b>	<b>2</b>	<b>S17 AND S6</b>
S19	12	S16 NOT S18
<b>S20</b>	<b>12</b>	<b>Sort S19/ALL/PY,A</b>
S21	215	(S1:S2 AND S8:S9) NOT (S10 OR S15)
S22	111	S21 AND S6
S23	94	RD (unique items)
S24	423467	S1/TI,DE OR S2/TI,DE OR S6/TI,DE
S25	78	S23 AND S24
<b>S26</b>	<b>78</b>	<b>Sort S25/ALL/PY,A</b>

13/6/3 (Item 3 from file: 50)

01503977 CAB Accession Number: 842422058

Selecting preferred solutions for the wet cleaning of table potatoes  
 after storage.

Original Title: Auswahl von Vorzugslosungen bei der Nassaufbereitung

von Speisekartoffeln nach der Lagerung.

Publication Year: 1984

13/6/10 (Item 10 from file: 50)  
03816083 CAB Accession Number: 992402819

Washing root crops.

Original Title: Wasche von Wurzelfruchten.

Publication Year: 1999

13/6/13 (Item 13 from file: 144)

16170318 PASCAL No.: 03-0327279

Root epidermal adhesion in five sweetpotato cultivars during curing and storage

2002

13/7/1 (Item 1 from file: 51)

DIALOG(R)File 51:Food Sci.&Tech.Abs

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00013562 70-02-j0192 SUBFILE: FSTA

Peeling potatoes using NaOH solution.)

Szymankiewicz, A.

Przemysl Spozywczy 1969 , 23 (6) 249-50

NOTE: 5 ref.

DOCUMENT TYPE: Journal Article

LANGUAGE: Polish

This study was carried out at the Int. Agric. Centre in Wageningen. 6 replications of 3 kg batches of washed G378BintjeG378 potatoes (40-50 mm) were used in a quarter-scale expt. installation. The potatoes were immersed for 4-6 min in tanks of 20% NaOH solution at 65 DEGREE C, (i) with or (ii) without addition of 2.5% AOAKITE-78 (aryl-alkyl sulphonate), and transferred to the washing unit, where skins and residual alkali were removed by water jets acting for 3 min at 6 atm. pressure. Mean wt. losses and numbers of eyes incompletely cleaned in 4, 5 or 6 min treatments respectively were: (i), 12.0, 17.4 and 20.6% and 99, 53 and 27; (ii), 8.8, 12.7 and 20.1% and 136, 94 and 34. Similar tests were also carried out with 1 min immersion in 20% NaOH solution at 90 DEGREE C and holding for 3, 4, 5 or 6 min before washing; wt. losses and numbers of incompletely cleaned eyes were greater (17.8-23.0% and 103-59) than with immersion at 65 DEGREE C, which is recommended. (SKK)

13/7/2 (Item 2 from file: 51)

DIALOG(R)File 51:Food Sci.&Tech.Abs

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00177607 79-12-j2106 SUBFILE: FSTA

Processing techniques: the winning combination.

Anon.

Quick Frozen Foods 1978 , 40 (8) 37-38, 40, 43-45

DOCUMENT TYPE: Journal Article

LANGUAGE: English

Carnation is one of the largest US processors of frozen potatoes for the food service market. The 3 Washington plants and 1 Idaho plant process 4 million lb/day of potatoes. The processing cycle begins at the peeling tanks, where Russet Burbank potatoes are immersed in a hot caustic soda solution and thoroughly washed by high pressure water jets. The potatoes are then visually inspected for defects, all having imperfections are removed from the line, and any remaining skin, unpeeled eyes, bruises

and other blemishes are manually removed. Special high-speed Urschel cutters divide them into strips as long as 8 in. Shaker-sizers remove thin slivers, short pieces and chips after the cutting operation. After sizing, employees remove strips having discoloration and other defects. The strips then pass through a triple-stage **water** blanch to inactivate surface enzymes and neutralize **potato** sugar. The strips are hot-air dried before the double-stage frying operation. The fried **potato** strips pass over a vibrating belt to remove excess oil, are then conveyed on wire mesh to the tunnel to be blast frozen at -40 DEGREE F, then move through another sizing operation, before passing to the packaging line to be weighed and fed automatically into packages. (VJG)

13/7/4 (Item 4 from file: 50)  
DIALOG(R)File 50:CAB Abstracts  
(c) 2004 CAB International. All rts. reserv.  
01763477 CAB Accession Number: 862428522  
Hydraulic separation of **potatoes** from clods and stones.  
Original Title: Hydraulicke rozdruzovani brambor.  
Kuhn, G.; Sheibe, K.; Kern, K.  
Vysoka skola inzenyrska Berlin-Wartenberg, German Democratic Republic.  
Mechanizace Zemedelstvi vol. 35 (12): p.546-549  
Publication Year: 1985  
2 fig., 1 tab. --  
Language: Czech  
Document Type: Journal article  
Two prototype machines using a **water jet** for tuber/stone separation are briefly described. Min. design parameters were: 20 t/h sorting capacity, **potato** damage <0.2%, efficiency of separation near 100%, **water** use <2.5 m3/h. Further modifications of the separators are recommended.

13/7/5 (Item 5 from file: 53)  
DIALOG(R)File 53:FOODLINE(R): Science Sight  
(c) 2004 LFRA. All rts. reserv.  
00260848 FOODLINE ACCESSION NUMBER: 273120  
Processing. (Brine injectors, bite-size fish portions, dryer control, defect removal system for French fries, **waterjet cutters**).  
Anon  
Food Processing 47 (7), 81-6 (4pp.)  
1986  
LANGUAGE: English  
DOCUMENT TYPE: Journal article  
FOODLINE UPDATE CODE: 19911129  
SECTION HEADING: OLD MATERIAL

13/7/6 (Item 6 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2004 BIOSIS. All rts. reserv.  
0008256096 BIOSIS NO.: 199293098987  
EVALUATION OF A **WATER JET CUTTING SYSTEM FOR SLICING POTATOES**  
AUTHOR: BECKER R (Reprint); GRAY G M  
AUTHOR ADDRESS: USDA-ARS, WESTERN REGIONAL RES CENT, 800 BUCHANAN ST,  
ALBANY, CALIF 94710, USA\*\*USA  
JOURNAL: Journal of Food Science 57 (1): p132-137 1992  
ISSN: 0022-1147  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract



LANGUAGE: ENGLISH

ABSTRACT: A **water jet cutting** machine was used to **slice potato** tubers, and characteristics of the **cut** surfaces were studied. Irregularities on the **cut** face were visualized by staining with a nonspecific protein stain. The amount of protein extractable from the **cut** face was measured and used to quantitate the cellular damage resulting from different **water jet** operational conditions. Observations were confirmed with scanning electron microscopy. A wide range of **water jet** settings could be used to **cut potato slices**. French fries **cut** with the **water jet** set to cause intermediate subsurface damage had increased color irregularities but no extreme taste or textural differences compared to conventionally **cut** controls.

get this  
article?

13/7/8 (Item 8 from file: 51)

DIALOG(R)File 51:Food Sci.&Tech.Abs

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00748358 97-11-j0144 SUBFILE: FSTA

A precise device.

Anon.

Potato Business World 1996 , 4 (4) 28-30, 32

DOCUMENT TYPE: Journal Article ISSN: 0968-7661

LANGUAGE: English

Equipment for on-line sorting and detection and removal of defects in **potatoes** during processing is discussed. Aspects considered include: approaches to defect removal; economic factors affecting the viability of equipment to **cut** out defects compared with rejection of defective products; the TR-4 dry product colour sorter manufactured by ELEXSO Sortiertechnik; Key Technology's ADR111, which scans and **cuts** defects from **potato** products; and the Pulsarr RX/WJC, a flat bed sorter combined with **water jet cutting** of defects. (TJR)

13/7/9 (Item 9 from file: 51)

DIALOG(R)File 51:Food Sci.&Tech.Abs

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00753501 1998-02-e0078 SUBFILE: FSTA

Processing solutions: freezers, chillers and equipment for the processing line.

Anon.

Frozen & Chilled **Foods** 1997 , 51 (4) 23

DOCUMENT TYPE: Journal Article

LANGUAGE: English

A range of equipment, produced by Frigoscandia, for portioning, coating, frying, cooking and freezing or chilling of **foods** is discussed. Aspects considered include: freezers which decrease freezing times and dehydration losses from flat products such as fish fillets, burgers and chicken sticks; freezers in which the fluidization technique is used in many new applications such as for the freeezing of herbs, pizza toppings and shredded cheese; ovens and cookers which use the impingement air velocity technique to enhance cooking and browning and increase product yield; a thermal fluid heated fryer for large oil volumes which uses a novel hygienic heat exchanger to overcome problems (sluggish response and difficulty of cleaning) previously associated with this type of fryer; developments in 'intelligent' **water jet** and blade portioning and **cutting** systems; and developments in **potato** processing machinery.

13/7/11 (Item 11 from file: 53)

DIALOG(R)File 53:FOODLINE(R): Science Sight

(c) 2004 LFRA. All rts. reserv.

01010452 FOODLINE ACCESSION NUMBER: 547639

Technology at the **cutting** edge.

Anon

British Baker (February 9), 198 (5), 16-22 (6pp) (0 ref.)

2001

PUBLISHER: Quantum Publishing Ltd Address: PO Box 109, Quantum House, 19  
Scarbrook Road, Croydon CR9 1LX, UK Telephone: +44 (20) 8565 4290

Fax: +44 (20) 8565 4302 Web: [www.britishbaker.net](http://www.britishbaker.net)

ISSN NO: 0007-0300

LANGUAGE: English

DOCUMENT TYPE: Journal article

FOODLINE UPDATE CODE: 20010316

ABSTRACT: Developments in **cutting** and **slicing** technology for the baking industry are described. A cake-portioning system designed to overcome difficulties in **cutting** topped **fruit** cakes has been developed by ultrasonic technology specialist Branson Ultrasonics in association with RHM Technology. Relatively high moisture levels and differing densities of cake constituents pose severe practical problems in **cutting**. The ultrasonic proportioning system, which operates horizontally, is considered particularly suitable for cream cakes, tarts, flans and pies containing **fruit** and those with **meat** and **vegetable** mixtures. Ultrasonic **cutting** provides a practical and economic alternative to high-pressure water - jet cutting systems. **Vegetable** preparation units available from Gilberts Food Equipment include the Easy Tomato **Slicer**, the Easy Onion **Slicer** and the Easy Frycutter for **cutting** **potatoes** to make French fries - machines ergonomically designed for ease of use. The JBS Process Engineering **water** splitter for tin bread production is a simple and hygienic labour-saving alternative to traditional manual or mechanical blade splitting of dough located between the final prover and oven. Record Pelkman has designed the advanced Krumbein range of **food cutters** for use in ambient production of cakes and gateaux. Gasparin has developed blade and disc **cutting** systems using reciprocating blades, continuous blades or spinning discs.

SECTION HEADING: CEREAL PRODUCTS

13/7/12 (Item 12 from file: 51)

DIALOG(R)File 51:Food Sci.&Tech.Abs

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00867914 2002-Ra0853 SUBFILE: FSTA

Troubleshooting sea**food** products.

Sasiela, R. J.

Icelandic USA Inc., 904 Woods Rd., Cambridge, MD 21613, USA.

[rsasiela\(a\)icelandic.com](mailto:rsasiela(a)icelandic.com)

**Food Industry Journal** 2002 , 5 (2) 125-155

NOTE: 64 ref.

DOCUMENT TYPE: Review ISSN: 1462-3099

LANGUAGE: English

Developments in sea **food** coating and other processing technologies are reviewed, focusing on possible processing problems and how they may be avoided. Individual aspects considered include: effects of product composition on processing (influence of high fat contents, moisture loss and connective tissue); processing considerations for double frozen sea **foods**; processing considerations for shaped sea **foods** (**water-jet** fish

portioning, single- and multi-cavity 3-dimensional shaping, **slicing** and sawing, internal binding systems); tempering of 'frozen-at-sea' fish blocks; emerging trends for flavour improvement; approaches to reduced fat absorption in frozen sea **foods** (use of overspray/dips before prefrying, use of non-fried coating systems); developments in fresh breadcrumb coatings (marketing and equipment considerations); and novel coatings for sea **foods** (beer-battered coatings, shredded **potato** coatings).

13/7/14 (Item 14 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2004 CAB International. All rts. reserv.

04643688 CAB Accession Number: 20043029597

**Cutting agricultural goods with a high-pressure water - jet .**

Original Title: Schneiden landwirtschaftlicher Guter mit Hochdruckwasserstrahl.

Ligocki, A.; Harms, H. H.

Institut fur Landmaschinen und Fluidtechnik der TU Braunschweig, Langer Kamp 19a, 38106 Braunschweig, Brunswick, Germany.

Landtechnik vol. 58 (6): p.378-379

Publication Year: 2003

ISSN: 0023-8082

En translation available at [www.lantechnik-net.com](http://www.lantechnik-net.com) --

Language: German Summary Language: english

Document Type: Journal article

Results are given of a 3-year study at the Institute of Farm Machines and Fluid Power in Braunschweig, Germany, on the **water - jet cutting** of agricultural goods ( **potatoes** , sugarbeet, maize and maize stems, grasses and carrots). Besides ascertaining the functional relationships between the parameters of the **high-pressure water - jet cutting** tool and the various agricultural goods, an assessment of the **cutting** potential of the **water - jet cutting** tool and an analysis of the **cutting** process were conducted. 1 ref.

18/7/1 (Item 1 from file: 285)

DIALOG(R)File 285:BioBusiness(R)

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00243826

**Robotic high pressure water jet cutting of chuck slices .**

Heiland W K; Konstance R P; Craig J C Jr

U.S. DEP. AGRIC., 600 EAST MERMAID LANE, EASTERN REGIONAL RES. CENT., PHILADELPHIA, PA. 19118.

Journal of **Food Process Engineering** Vol.12, No.2, p.131-136, 1990.

ABSTRACT: With the objective of producing high quality and economical starting material for restructured beef products, the use of a high **pressure water jet** was investigated for excising objectionable material from **slices** of bone-in beef chuck. From the limited number of tests conducted, best conditions for a clean, smooth **cut** were obtained with a **water jet** orifice diameter of 0.15 mm (0.006 in), a **water pressure** of 380 MPa (55,000 PSI), a **slice** thickness of 19 mm (3/4 in) and a linear **cutting** speed of 10.9 m/min (430 in/min). A preliminary cost comparison indicated that a fully automated line had a greater economic advantage over the manual method.

18/7/2 (Item 1 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2004 CAB International. All rts. reserv.

01669647 CAB Accession Number: 850333016

Methods for removing young shoots in **fruiting** raspberries.

Sidorovich, A. S.

Selektsiya i Agrotekhnika Plodovo-Yagodnykh i Dekorativnykh Kul'tur.

p.102-112

Publication Year: 1985

Publisher: -- Novosibirsk, USSR

Language: Russian

Document Type: Miscellaneous

Secondary Journal Source: Referativnyi Zhurnal, 55 (Rasteniievodstvo),  
1985, 9.55.743.

Interactions between manual, **chemical** and mechanical methods of removing young shoots were considered and optimal dates, shoot height, number of treatments, **chemicals** and their rates were determined. The most effective mechanical method was with a high **pressure** (100-200 atmospheres) **water jet** when the shoots were 15-20 cm high or by repeated **cutting** (3 or 4 times). Removal of young shoots increased yields by 1.5-2.2 times. 8 ref.

20/6/1 (Item 1 from file: 51)

00138643 77-09-s1631 SUBFILE: FSTA

Is **water** alone adequate for cleaning in the **meat** processing industry?)

Ist Wasser allein ausreichend fuer Reinigungsarbeiten in der  
fleischverarbeitenden Industrie?

1976

20/6/4 (Item 4 from file: 5)

0005038343 BIOSIS NO.: 198681002234

CLEANING AND DISINFECTION OF KNIVES IN THE **MEAT** INDUSTRY

1985

20/6/6 (Item 6 from file: 285)

00520153

**Jet** injection for the stunning of slaughter pigs: Investigations on the  
slaughtering line.

20/6/8 (Item 8 from file: 285)

00620223

The use of a high **pressure waterjet** combined with electroimmobilization for  
the stunning of slaughter pigs: Some aspects of **meat** quality.

20/7/3 (Item 3 from file: 50)

DIALOG(R)File 50:CAB Abstracts

(c) 2004 CAB International. All rts. reserv.

00704524 CAB Accession Number: 782401176

Mechanical system for harvesting and handling strawberries for  
processing.

Nelson, G. S.; Morris, J. R.; Kattan, A. A.; Shelby, K. R.

Agric. Engng Dep., Arkansas Univ., Fayetteville, USA.

Transactions of the ASAE vol. 21 (3): p.442-445, 450

Publication Year: 1978

ISSN: 0001-2351

7 fig., 2 tab. --

Language: English

Document Type: Journal article

A commercial mechanical strawberry harvester was tested on specially

prepared 0.61 m wide beds and 7 plant varieties; the **fruit** was graded in 3 categories and evaluated by **chemical** analysis and taste panels. Results indicate that once-over machine harvesting at the correct time gives 85-100% yield and adequate quality for some new cultivars grown in shaped beds. A prototype continuous-flow handling system was developed, with a dump-wash tank and plastic conveyor, a trash-eliminator-cleaner with 25 mm diam., 610 mm long counter-rotating rubber-covered rollers cleaned by **water jets**, and a vibrating washer with a tapered-finger sizing device. It processed 2 t/h for juice and puree products satisfactorily but did not remove calyxes; some hand-sorting of mouldy berries was necessary. ADDITIONAL ABSTRACT: The results are given of trials with a commercial model of a mechanical strawberry harvester, with several cvs and selections and 3 harvesting dates. In a once-over operation 80-100% of the crop was harvested, **fruit** quality being acceptable for processing. Good results were also obtained with a prototype continuous-flow system for cleaning and sizing machine-harvested strawberries to be used for juice or puree products. 12 ref.

20/7/5 (Item 5 from file: 285)  
DIALOG(R)File 285:BioBusiness(R)  
(c) 1998 BIOSIS. All rts. reserv.  
00467675

**Water jet** technology and salt treatment used for carrot sticks.  
Tatsumi Y; Watada A E  
USDA, ARS, HORTICULTURAL CROPS QUALITY LAB., BELTSVILLE, MD. 20705-2350.  
Hortscience Vol.27, No.6, p.651, 1992.  
89th Annual Meeting of the American Society for Horticultural Science,  
Honolulu, Hawaii, USA, July 30-August 6, 1992.

20/7/9 (Item 9 from file: 5)  
DIALOG(R)File 5:Biosis Previews(R)  
(c) 2004 BIOSIS. All rts. reserv.  
0009349394 BIOSIS NO.: 199497370679

Comparison of bacteriological parameters values in meat production  
obtained before and after environmental sanitation

AUTHOR: Rizzetto R (Reprint); Rebagliati B; Ravera G  
AUTHOR ADDRESS: Istituto di Igiene e Med. Prev. dell'Universita di  
Genova-Via Pastore, 1-16135 Genova, Italy\*\*Italy  
JOURNAL: Igiene Moderna 101 (2): p229-240 1994 1994  
ISSN: 0019-1655  
DOCUMENT TYPE: Article  
RECORD TYPE: Abstract  
LANGUAGE: Italian

ABSTRACT: On enforcement of 88/657/CEE Guidelines about **Meat** Trades Inside European Community, authors refer about a strong reduction of some bacteriological parameters values obtained in **meat** production after combined high pressure hot steam and Amphoteric Compound (Tego 51), environmental sanitation followed by high **pressure** hot rinsing **water jets**. No **pathogens** were found and reductions from 11 to 86 times of other bacteriological parameters were obtained for minced **meat**; less changes were found in chopped **meat** but very low values were present still before sanitation. Statistically significative differences in minced **meat** were very high for 32 degree C and 20 degree C Bacterial Counts, for Faecal Coliforms, E. coli and **apathogen** Staphylococci (p = 0,0001) but still good were those related to Faecal Streptococci (p = 0,0006) and to Total Coliforms (p = 0,0012).

20/7/10 (Item 10 from file: 285)  
DIALOG(R)File 285:BioBusiness(R)  
(c) 1998 BIOSIS. All rts. reserv.  
00742394  
New strategies for kiwifruit processing.  
Steele R J; Johnson R L  
CSIRO Div. Food Res. Sci. Technol., PO Box 52, North Ryde, NSW 2113,  
Australia.  
International Journal of Food Science & Technology Vol.30, No.1, p.13-21,  
1995.  
ABSTRACT: Improved strategies are presented for recovering the chloroplast  
fraction from kiwifruit. One strategy is to extract chlorophyll from the  
'peel', i.e. the outer 29% of the fruit, the remainder being processed to  
juice by conventional methods with the sacrifice of its chlorophyll  
content. This strategy recovers two-thirds of the chlorophyll content of  
the fruit and speeds the overall processing. A second strategy  
facilitates processing by washing the screens used for separating fruit  
tissues from chloroplast-containing juice. The washing with fine water  
jets cleans the screens in situ of the kiwifruit slime. It was also shown  
that chloroplast extracts when stored in a domestic freezer are stable for  
at least one year. Recombined frozen kiwifruit products such as sorbet and  
ice-cream are chlorophyll-colour stable for at least 7 months.

20/7/11 (Item 11 from file: 53)  
DIALOG(R)File 53:FOODLINE(R): Science Sight  
(c) 2004 LFRA. All rts. reserv.  
00670050 FOODLINE ACCESSION NUMBER: 446644  
Safety firsts (food safety).  
Neff J  
Food Processing, Chicago (July), 58 (7), 92+94-95 (0 ref.)  
~~1997~~  
ISSN NO: 0015-6523  
LANGUAGE: English  
DOCUMENT TYPE: Journal article  
FOODLINE UPDATE CODE: 19971021  
ABSTRACT: In response to growing concerns about food safety and consumer  
demands for safer food, US company FMC Corporation has been working to  
develop a wide array of technologies to increase the safety of the food  
supply. FMC has attempted to reduce microbial contamination in thermal  
processing, process control, materials handling, and aseptic citrus  
processing. The steam pasteurization process has eliminated  
Escherichia coli, Salmonella, and Listeria from the surfaces of beef,  
poultry, and pork carcasses. Freezing and cooking processes to reduce  
safety risks in meats are also being developed. Waterjet  
Portioners use high-pressure water to eliminate the spread of  
pathogens from blades. Process control systems help processors comply  
with HACCP regulations. FMC technology allows commercial sterilization,  
chilling and storage of unconcentrated citrus juice.

SECTION HEADING: PROCESSING

26/6/2 (Item 2 from file: 53)  
00997742 FOODLINE ACCESSION NUMBER: 621799  
Apparatus and method for detecting and removing undesirable material from  
work-pieces.  
PATENT: EP 1341418 A2

PATENT: WO 0243502 DATE:6.6.2002

26/6/3 (Item 3 from file: 51)  
00034403 71-07-vr0288 SUBFILE: S  
Removing **meat** from crayfish legs by air or **water jets**.  
1970

26/6/6 (Item 6 from file: 53)  
00157696 **FOODLINE** ACCESSION NUMBER: 149811  
**Meat**, poultry and seafood technology: recent developments.  
1982

26/6/7 (Item 7 from file: 51)  
00315884 86-04-j0194 SUBFILE: FSTA  
(Machine for topping and cleaning leeks.)  
1985

26/6/8 (Item 8 from file: 51)  
00313146 86-02-r0011 SUBFILE: FSTA  
(Method and device for selective processing of fish.)  
Verfahren und Vorrichtung zum selektiven Bearbeiten von Fischen.  
1985

26/6/9 (Item 9 from file: 50)  
01867514 CAB Accession Number: 872431434  
**Water jet cutting** of cauliflower stems for mechanical harvesting -  
a feasibility study.  
Divisional Note, AFRC Institute of Engineering Research, UK  
Publication Year: 1987

26/6/10 (Item 10 from file: 53)  
00755985 **FOODLINE** ACCESSION NUMBER: 183353  
The face of the future could be that of a robot...  
1987

26/6/12 (Item 12 from file: 51)  
00357003 88-05-s0052 SUBFILE: FSTA  
Recent advances in fresh **meat** technology.  
In '33rd International Congress of **Meat** Science & Technology'.  
Helsinki, Finland. 2-7 Aug. 1987 (see FSTA (1988) 20 5S40).  
1987

26/6/14 (Item 14 from file: 285)  
00171211  
**CUTTING** SYSTEM REPLACES BLADES WITH HAIR-THIN **STREAM OF WATER**.

26/6/16 (Item 16 from file: 53)  
00466859 **FOODLINE** ACCESSION NUMBER: 254087  
Method and apparatus for automatically **cutting** food products to  
predetermined weight or shape.  
PATENT: EP 412973 A1  
PATENT: WO 8908983 DATE:19891005

26/6/17 (Item 17 from file: 51)  
00621901 91-04-s0105 SUBFILE: FSTA  
Theoretical studies on automation of **cutting** pig carcasses into primal

**cuts** : helpful robot technology.)

Theoretische Ansaetze zur Automatisierung der Grobzerlegung von  
Schweinehaelften: Hilfreiche Robotertechnik.

1990

26/6/18 (Item 18 from file: 53)

00233228 **FOODLINE** ACCESSION NUMBER: 242166

Contribution to mechanised **cutting** of sides of pork.

1990

26/6/19 (Item 19 from file: 5)

0007164297 BIOSIS NO.: 199089082188

ROBOTIC HIGH **PRESSURE WATER JET CUTTING** OF CHUCK **SLICES**

1990

26/6/20 (Item 20 from file: 51)

00641063 92-05-j0163 SUBFILE: FSTA

(Machine for washing and trimming of leeks.)

1991

26/6/21 (Item 21 from file: 94)

01567207 JICST ACCESSION NUMBER: 92A0421603 FILE SEGMENT: JICST-E

Special issue : the development of job shop. Recent utilization of **water  
jet cutter.**, 1992

26/6/22 (Item 22 from file: 53)

00964605 **FOODLINE** ACCESSION NUMBER: 318996

'None more precise.' Canada's Elmira poultry plant uses the new DSI.

1992

26/6/23 (Item 23 from file: 53)

00964572 **FOODLINE** ACCESSION NUMBER: 284852

Atlanta IPE'92: Machine vision is no longer visionary.

1992

26/6/24 (Item 24 from file: 53)

00728925 **FOODLINE** ACCESSION NUMBER: 290752

Vision-controlled **waterjet cuts** 3,300 lbs. of chicken per hour.

1992

26/6/25 (Item 25 from file: 53)

00961787 **FOODLINE** ACCESSION NUMBER: 336613

Sodium chloride treatment or **waterjet slicing** effects on white tissue  
development of carrot **slices** .

1993

26/6/26 (Item 26 from file: 53)

00954188 **FOODLINE** ACCESSION NUMBER: 330239

DSI.

1993

26/6/27 (Item 27 from file: 53)

00461066 **FOODLINE** ACCESSION NUMBER: 325181

Technology update (processing equipment developments).

1993



26/6/29 (Item 29 from file: 53)  
00453780 **FOODLINE** ACCESSION NUMBER: 319323  
**Waterjet** cutting boosts efficiency by 70%.  
1993

26/6/30 (Item 30 from file: 53)  
00307428 **FOODLINE** ACCESSION NUMBER: 330427  
Design Systems, Inc. (Exhibitor at the International **Meat** Industry  
Convention, October 1993, Chicago).  
1993

26/6/31 (Item 31 from file: 94)  
02211912 JICST ACCESSION NUMBER: 94A0921684 FILE SEGMENT: JICST-E  
Automatic **Water Jet Meat Cutter.**, 1994

26/6/32 (Item 32 from file: 51)  
00705882 95-12-s0035 SUBFILE: FSTA  
**Waterjet** cutting systems.  
1994/95

26/6/33 (Item 33 from file: 53)  
00543815 **FOODLINE** ACCESSION NUMBER: 419633  
Arrangement and plant for fluid **jet** cutting of food products.  
PATENT: EP 731641  
PATENT: WO 9405158 DATE:19940317

26/6/34 (Item 34 from file: 53)  
00543520 **FOODLINE** ACCESSION NUMBER: 403894  
Methods of preparing french racks and/or apparatus used therefore.  
PATENT: GB 2291581 A  
PATENT: WO 9422314 DATE:19941013

26/6/35 (Item 35 from file: 53)  
00540433 **FOODLINE** ACCESSION NUMBER: 351466  
A **slice** of the action.  
1994

26/6/36 (Item 36 from file: 53)  
00540158 **FOODLINE** ACCESSION NUMBER: 344482  
Elmira seeks value not volume. (Canadian poultry processor).  
1994

26/6/37 (Item 37 from file: 53)  
00341648 **FOODLINE** ACCESSION NUMBER: 368180  
**Waterjet** cutting and trimming (from Frigoscandia, Design Systems  
Incorporated).  
1994

26/6/38 (Item 38 from file: 53)  
00323357 **FOODLINE** ACCESSION NUMBER: 348969  
Portioner for **meats** . (Manufactured by Frigoscandia, Sweden.)  
1994

26/6/39 (Item 39 from file: 79)  
251859 94140333  
**CUTTING THE FAT WITH ELECTRIC EYES**

Publication Date: 19940601

26/6/40 (Item 40 from file: 94)  
02649629 JICST ACCESSION NUMBER: 95A0970671 FILE SEGMENT: JICST-E  
Peeling Technology for Circular Objects with Plain **Water Jets** . , 1995

26/6/41 (Item 41 from file: 94)  
02359073 JICST ACCESSION NUMBER: 95A0297390 FILE SEGMENT: JICST-E  
Automatic **meat cutting** equipment with **water jet** . , 1995

26/6/42 (Item 42 from file: 53)  
00716892 **FOODLINE** ACCESSION NUMBER: 378109  
SEG-Poulets uses **water - jet** technology for **cutting** up poultry.  
1995

26/6/43 (Item 43 from file: 53)  
00716616 **FOODLINE** ACCESSION NUMBER: 377785  
New developments in **cutting** and **slicing** .  
1995

26/6/44 (Item 44 from file: 53)  
00715336 **FOODLINE** ACCESSION NUMBER: 374609  
New **cutting** technologies.  
1995

26/6/45 (Item 45 from file: 53)  
00712373 **FOODLINE** ACCESSION NUMBER: 368759  
Sophisticated **water jet** portioner making waves in red- **meat** industry.  
1995

26/6/46 (Item 46 from file: 53)  
00695145 **FOODLINE** ACCESSION NUMBER: 399462  
AMI show reveals breakthroughs in **meat** processing.  
1995

26/6/47 (Item 47 from file: 53)  
00363523 **FOODLINE** ACCESSION NUMBER: 397157  
Now: automatic fat trimming. (The series 500 **water - jet cutters** from DSI  
Europe of Sweden.)  
1995

26/6/48 (Item 48 from file: 53)  
00361013 **FOODLINE** ACCESSION NUMBER: 394643  
500 Portioner **meat cutter** from DSI a **meat cutter**.)  
1995

26/6/49 (Item 49 from file: 53)  
00349978 **FOODLINE** ACCESSION NUMBER: 377024  
The Compuscan 300, a portion- **cutting** system from Cantrell Machine Inc.)  
1995

26/6/50 (Item 50 from file: 53)  
00349522 **FOODLINE** ACCESSION NUMBER: 376567  
New portioner (514 DSI Portioner, DSI).  
1995

26/6/51 (Item 51 from file: 53)  
00346505 **FOODLINE** ACCESSION NUMBER: 373441  
Aqua**jet** facts and figures. (Aqua**jet** **water - jet** cutting equipment from  
Cox and Wright in the UK.)  
1995

26/6/52 (Item 52 from file: 53)  
00346233 **FOODLINE** ACCESSION NUMBER: 373169  
Elrad **water - jet** cutter. (The CompuScan 300 **water - jet** cutter from  
Elrad of Israel.)  
1995

26/6/53 (Item 53 from file: 53)  
00343975 **FOODLINE** ACCESSION NUMBER: 370508  
Pulsarr **waterjet** cutting. (The FBD/WJC system for removing bones and  
portioning **meat**.)  
1995

26/6/54 (Item 54 from file: 94)  
03063457 JICST ACCESSION NUMBER: 96A0996731 FILE SEGMENT: JICST-E  
Automatic **Water Jet Meat Cutter**., 1996

26/6/55 (Item 55 from file: 53)  
00702649 **FOODLINE** ACCESSION NUMBER: 413099  
Stunning of slaughter pigs with high **pressure water jet** .  
1996

26/6/56 (Item 56 from file: 53)  
00681715 **FOODLINE** ACCESSION NUMBER: 427002  
At the **cutting** edge.  
1996

26/6/57 (Item 57 from file: 53)  
00678767 **FOODLINE** ACCESSION NUMBER: 420756  
The **food** industry in Birmingham.  
1996

26/6/58 (Item 58 from file: 51)  
00747860 97-11-e0038 SUBFILE: FSTA  
Precise **cut** . High **pressure jet** as **cutting** tool.  
Scharfer Schnitt. Hochdruckfluessigkeitsstrahlen als Schneidwerkzeug.  
1997

26/6/59 (Item 59 from file: 53)  
00707324 **FOODLINE** ACCESSION NUMBER: 429834  
**Cutting** and **slicing meat** products. The advent of intelligent **slicers** .  
1997

26/6/61 (Item 61 from file: 34)  
07187822 Genuine Article#: 134CB Number of References: 7  
Title: An expert process planning system for **meat** **cutting** by high  
**pressure water - jet** (ABSTRACT AVAILABLE)  
Publication date: 19981201

26/6/62 (Item 62 from file: 50)  
03704708 CAB Accession Number: 990401725

Cutting with ultrasound and water - jets .

Original Title: La decoupe: Trancher aux ultra-sons et au jet d'eau.

Publication Year: 1998

26/6/63 (Item 63 from file: 34)

08247609 Genuine Article#: 262KR Number of References: 10

Title: A study of high **pressure water jets** for **cutting** chicken breast  
**meat** (ABSTRACT AVAILABLE)

Publication date: 19991000

26/6/65 (Item 65 from file: 144)

14465837 PASCAL No.: 00-0126306

Charcuterie cuite : Plus de maitrise des procedes que d'innovations  
majeures

(Cooked pork products : Greater process control but few major innovations)

1999

26/6/70 (Item 70 from file: 53)

00990433 **FOODLINE** ACCESSION NUMBER: 614206

Machine for **cutting vegetables** into pieces.

PATENT: WO 03047371 A1

26/6/71 (Item 71 from file: 53)

00895928 **FOODLINE** ACCESSION NUMBER: 569124

Method of orienting and positioning **vegetables** on a pocketed conveyor.

PATENT: US 6308600 B

26/6/73 (Item 73 from file: 53)

00819263 **FOODLINE** ACCESSION NUMBER: 500341

**Vegetable** topping, tailing and **cutting** machine.

PATENT: US 5916354 B

26/6/74 (Item 74 from file: 53)

00650804 **FOODLINE** ACCESSION NUMBER: 476171

Method and apparatus for scoring poultry hocks.

PATENT: US 5766064 B

26/6/76 (Item 76 from file: 53)

00440157 **FOODLINE** ACCESSION NUMBER: 155815

Thigh deboner (poultry).

PATENT: US 4639972

26/6/77 (Item 77 from file: 53)

00182821 **FOODLINE** ACCESSION NUMBER: 175369

Apparatus and methods for removal of tissue from bone.

PATENT: EP 256652

26/7/1 (Item 1 from file: 53)

DIALOG(R)File 53:**FOODLINE**(R): Science Sight

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01014268 **FOODLINE** ACCESSION NUMBER: 638462

**Vegetable** cutting machine and cutting method obtained with said  
machine.

Urtasun Abarzuza J M

PATENT ASSIGNEE: Hipema Inversiones SL

PATENT: EP 1410723 A1

PATENT: WO 0226063 DATE:4.4.2002  
APPLICATION COUNTRY: ES (DATE(S):28.9.2000)  
DESIGNATED STATES:

See published patent document for Designated Contracting States.

X-REFERENCE: **FRUIT AND VEGETABLE** PRODUCTS

LANGUAGE: Spanish

SUMMARY LANGUAGE: English

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 20040520

ABSTRACT: A machine designed for trimming and chopping **vegetables**, such as green beans prior to freezing, is disclosed. The **vegetables**, aligned longitudinally, move along the tracks of a conveyor belt, above which is a group of **cutting** heads using high-pressure **water jets**. Each track has its own **cutting** head. A linear TV camera located in front of the **cutting** heads scans the **vegetables** and the separation between them. This information is used by an electronic control system to regulate the motors of the **cutting** heads and the conveyor belt, so that the **vegetables** are **cut** as required.

SECTION HEADING: **FRUIT AND VEGETABLE** PRODUCTS

26/7/4 (Item 4 from file: 50)

DIALOG(R) File 50: CAB Abstracts

(c) 2004 CAB International. All rts. reserv.

00130449 CAB Accession Number: 740315773

**Cutting** lettuce stems with a **water jet**.

Schild, M.; Harriott, B. L.

Arizona University, Tucson, USA.

Transactions of the ASAE vol. 16 (3): p.440-442

Publication Year: 1973

ISSN: 0001-2351

1 pl., 1 fig. --

Language: English

Document Type: Journal article

The effectiveness was assessed of 3 nozzle designs for **cutting** lettuce stems; other variables included nozzle-to-stem distance, harvesting speed, orifice diameter and **water pressure** up to 6000 lbf/in<sup>2</sup>. A total of 86 treatments proved capable of severing the stem, of which 54 employed an SDP (spray dry-P) model nozzle. Field harvesting systems employing this technique were considered feasible; power and **water** requirements would be adequate, and tank refilling would be necessary less frequently than unloading of harvested lettuce. 7 ref.

26/7/5 (Item 5 from file: 53)

DIALOG(R) File 53: **FOODLINE**(R): Science Sight

(c) 2004 LFRA. All rts. reserv.

00030380 **FOODLINE** ACCESSION NUMBER: 10985

High **pressure** washers maximize hygiene and **cut** costs.

Grayson P

**Food** Trade Review 44 (11), 7-9.

1974

LANGUAGE: Unspecified

DOCUMENT TYPE: Journal article

**FOODLINE** UPDATE CODE: 19801001

26/7/11 (Item 11 from file: 51)

DIALOG(R) File 51: **Food** Sci.&Tech.Abs

(c) 2004 FSTA IFIS Publishing. All rts. reserv.  
00360062 88-07-v0077 SUBFILE: FSTA  
Prolonging the shelf life of pre- cut fresh celery.  
Orr, A.; Spingler, J. O.  
DNA Plant Technology Corp.  
PATENT CO.: United States Patent 1987  
PATENT NO.: US 4 711 789  
NOTE: US 792338 (851029) (DNA Plant Technol., Cinnaminson, NJ, USA)  
DOCUMENT TYPE: Patent  
LANGUAGE: English

The celery is cut with a water jet cutter to minimize bruising and tissue damage, contacted with water at 1 DEGREE C for 2-5 min, and then dried. The cut celery is packaged and sealed in a container suitable for preventing microbial contamination, e.g. foamed polypropylene having gas permeability of 50-300 cm<sup>3</sup> of O<sub>2</sub>/100 inch<sup>2</sup>-atm-24 h; moisture transmission rate of 1.5 g/100 inch<sup>2</sup>-24 h-90% RH, 70 DEGREE F; 200-800 cm<sup>3</sup> CO<sub>2</sub>/100 inch<sup>2</sup>-atm-24 h. The ratio of mass of celery:container surface is 1-6 g/inch<sup>2</sup>. (DMA)

26/7/63 (Item 63 from file: 34)  
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci  
(c) 2004 Inst for Sci Info. All rts. reserv.  
08247609 Genuine Article#: 262KR Number of References: 10  
Title: A study of high pressure water jets for cutting chicken breast meat  
Author(s): Bansal RK; Walker JT (REPRINT)  
Corporate Source: UNIV ARKANSAS,DEPT BIOL & AGR ENGN, 203 ENGN  
HALL/FAYETTEVILLE//AR/72701 (REPRINT); UNIV ARKANSAS,DEPT BIOL & AGR  
ENGN/FAYETTEVILLE//AR/72701  
Journal: JOURNAL OF FOOD PROCESS ENGINEERING, 1999, V22, N4 (OCT), P307-318  
ISSN: 0145-8876 Publication date: 19991000  
Publisher: FOOD NUTRITION PRESS INC, 6527 MAIN ST, P O BOX 374, TRUMBULL,  
CT 06611

Language: English Document Type: ARTICLE  
Abstract: A replicated experiment was conducted to determine optimum settings for orifice size, operating pressure, and nozzle traverse speed for cutting boneless chicken breast meat with high-pressure water jets. Three orifices of 0.076, 0.127 and 0.178 mm were tested with different water pressures in the 90 to 224 MPa range and nozzle traverse speeds in the 50 to 800 mm/s range. A 0.127-mm orifice working with water pressure in the range of 179 to 224 MPa and at 100 mm/s or slower cutting speed gave best results in this study to produce sharp clean cuts. Water jets from a 0.178-mm orifice frequently caused too much meat loss especially at higher wafer pressures and slower nozzle speeds. Variations in chicken filet thickness also had significant effect on chicken breast meat cutting quality and depth with both 0.076 and 0.127-mm orifices.

26/7/64 (Item 64 from file: 53)  
DIALOG(R)File 53:FOODLINE(R): Science Sight  
(c) 2004 LFRA. All rts. reserv.  
00812247 FOODLINE ACCESSION NUMBER: 493184  
Water cutting may hold the clue to cleaner chicken.  
Anon  
Meat Processing (February), 38 (2), 40 (0 ref.)  
1999

ISSN NO: 0025-6390

LANGUAGE: English

DOCUMENT TYPE: Journal article

FOODLINE UPDATE CODE: 19990512

ABSTRACT: High-pressure water-jet equipment for cutting meat and poultry products has been utilized to cut and portion muscle meats. The potential for expanding application of high-pressure water jets to meat cutting and deboning operations in primary poultry-processing operations has been examined. Research to determine possible removal of meat from non-eviscerated carcasses was conducted. Variables associated with this type of cutting were carried out using a prototype industrial robot. The cutting efficiency of high-pressure water jets was found to vary along the line of cut depending on various settings, meat thickness, temperature, and the presence of fat or connective fibrous tissue. Meat yield might be reduced if the cutting process of the water jet is not coherent with other cutting variables. A carcass-holding platform was developed for positioning the carcass in a neck-up position. Image-processing technology provided digital data for determining the cutting path along the centre line of breast meat and limb joints. Results showed that high-pressure water jets might be used effectively for separating chicken legs from the main body. At 33,00 psi, the water jet effectively sliced breast meat without penetrating the keel bone.

SECTION HEADING: PROTEINS

26/7/66 (Item 66 from file: 79)

DIALOG(R)File 79:Foods Adlibra(TM)

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305276 01020316

ON THE CUTTING EDGE

Author(s): Anon

Refrigerated & Frozen Foods, 11(12) (December 2000), p. 38,40-41

CODEN: RFFOEN

Publication Date: 20001201

Doc Type: JOURNAL

Simmons Foods' Van Buren, Arkansas, plant stays flexible to process chicken that is both 'on trend' and value added. A special cutting system uses high-pressure water jets to trim chicken breasts, according to programmed parameters.

26/7/67 (Item 67 from file: 95)

DIALOG(R)File 95:TEME-Technology & Management

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01844421 20040201656

Cutting-edge technology protects margins in cut -protection market  
(Die Schneidetechnologie schuetzt die Gewinnspannen beim Schnittschutzmarkt)  
Jackson, D

T3 Technical Textile Technology, v2, n4, pp6-9, 2003

Document type: journal article Language: English

Record type: Abstract

ABSTRACT:

Bereits im Mittelalter wurden Schnittschutzhemden aus Metallketten hergestellt, um die Soldaten vor den Wirkungen der Schwerter zu schuetzen. Dieses Prinzip wurde bis vor kurzem auch bei Schutzbekleidung fuer Fleischer angewendet. Der Nachteil der schweren und unbequemen Schutzkleidung wird durch neue schnittbestaendige Textilien vermieden. Es

gibt **jetzt** die Pruefnorm ASTM F1790-97, mit der solche gegen Schnittverletzungen schuetzende Bekleidung getestet werden kann. Die Produkte werden in 5 Klassen von Klasse 1 (= Baumwolle) bis Klasse 5 (= Stahl) eingestuft. Eine Neuentwicklung besteht aus EVA-beschichtetem ultrahochmolekularen Polyethylen (UHMWPE), die unter dem Namen Supreme Protector im Handel ist. Damit kann das Gewicht von 7 lbs/yd bei den Kettenmaterialien auf weniger als 2 lbs/yd gesenkt werden. Ein grosser Fleischverarbeiter hat diese Schutzkleidung kuerzlich eingefuehrt. Ein weiterer Bereich, der Schutzkleidung erfordert, ist das Schneiden mit Hochdruckwasser mit bis zu 40000 psi. Hierfuer wurde ein Aramidgewebe mit dem Namen TurtleSkin entwickelt. Weitere Kombinationen von Aramiden und fluessigkristallinen Polymeren wie PBO ergeben Schutzstufen von 3 bis 5. Honeywell kombiniert UHMWPE-Fasern mit Glasfasern unter dem Namen Spectra Guard. Fuer den Markt der schnittschuetzenden Materialien wird ein Wachstum von 3 - 4 % vorausgesagt. Weitere Informationen sind vom Autor unter Imra@charter.net oder telefonisch von den verschiedenen Herstellern zu erhalten.

26/7/68 (Item 68 from file: 144)  
DIALOG(R)File 144:Pascal  
(c) 2004 INIST/CNRS. All rts. reserv.  
16495739 PASCAL No.: 04-0140406  
Effect of **precut** sanitizing dip and **water jet cutting** on quality and shelf-life of fresh-**cut watermelon**  
MCGLYNN W G; BELLMER D D; REILLY S S  
Oklahoma State University, Department of Horticulture and Landscape Architecture/, **Food** and Agricultural Products, Research and Technology Center, 112 FAPC, Still**water**, OK 74078, United States; Department of Biosystems and Agricultural Engineering/ **Food** and Agricultural Products, Research and Technology Center, United States; **Food** and Agricultural Products Research and Technology Center, United States  
Journal: Journal of **food** quality, 2003, 26 (6) 489-498  
ISSN: 0146-9428 CODEN: JFQUD7 Availability: INIST-17765;  
354000119085070040  
No. of Refs.: 11 ref.  
Document Type: P (Serial) ; A (Analytic)  
Country of Publication: United States  
Language: English  
Whole **watermelons** were dipped in **water** or hypochlorite solution, and then **cut** with a knife or **water jet**. **Cut** melons were stored at 4C for up to 14 days and tested for color, texture, pH, soluble solids, weight loss, and bacterial counts. Sanitizing dip and **cutting** method had no effect on pH or soluble solids. Sanitizing dip had no effect on color, texture, or weight. **Water jet-cut** melon pieces were darker, knife-**cut** pieces were softer and showed higher weight loss. Aerobic plate counts for all treatments increased by up to 5 log cycles during storage. A **precut** sanitizing dip resulted in about a two log cycle reduction in initial aerobic and about a one log cycle reduction in initial coliform bacterial counts.  
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26/7/78 (Item 78 from file: 53)  
DIALOG(R)File 53:FOODLINE(R): Science Sight  
(c) 2004 LFRA. All rts. reserv.  
00163241 FOODLINE ACCESSION NUMBER: 155506  
An improved method for **slicing fruits and vegetables** .  
Orr A; Spingler J O



PATENT ASSIGNEE: DNA Plant Technology Corp

PATENT: EP 223111

NOTES: (U.S.A.) (29.10.85)

LANGUAGE: English

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 19870714

ABSTRACT: The invention relates to a method for **slicing fruits and vegetables** that minimises tissue damage and thus prolongs shelf-life. A high-**pressure water jet** of about 30,000 to about 50,000 psi is used to **cut the fruit or vegetable**. Examples are given comparing this with other **cutting** techniques, evaluating sensory quality, microflora and shelf-life.

26/7/75 (Item 75 from file: 53)

DIALOG(R)File 53:FOODLINE(R): Science Sight

(c) 2004 LFRA. All rts. reserv.

00442971 FOODLINE ACCESSION NUMBER: 176745

**Slicing** method.

Orr A

PATENT ASSIGNEE: DNA Plant Technology Corp

PATENT: US 4751094

LANGUAGE: English

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 19881122

26/7/72 (Item 72 from file: 53)

DIALOG(R)File 53:FOODLINE(R): Science Sight

(c) 2004 LFRA. All rts. reserv.

00826697 FOODLINE ACCESSION NUMBER: 507776

**Vegetable** topping, tailing and **cutting** machine and method.

Dragt S

PATENT ASSIGNEE: Wm Bolthouse Farms Inc

PATENT: WO 9939594 A1

APPLICATION COUNTRY: US (DATE(S):19980210)

PRIORITY APPLICATION DATE: 19990210

DESIGNATED STATES:

SeepublishedpatentdocumentforDesignatedContractingStates.

X-REFERENCE: **FRUIT AND VEGETABLE** PRODUCTS

LANGUAGE: English

DOCUMENT TYPE: Patent

FOODLINE UPDATE CODE: 19991112

ABSTRACT: Elongated **vegetables** such as carrots, parsnips and cucumbers require end-trimming and **cutting** into segments to prepare them for processing and subsequent packaging. This invention concerns a method and apparatus for trimming the ends of this type of **vegetable**, and, optionally, **cutting** them into segments of specified lengths. Existing systems use mechanical means to orient the produce, are complex and labour-intensive to maintain, and can be difficult to operate at high speeds. The use of **water jets** in the apparatus of the invention for positioning the **vegetables** enables a reduction in the number of mechanical parts, improved control and reduced machinery and maintenance costs.

SECTION HEADING: **FRUIT AND VEGETABLE** PRODUCTS

26/7/69 (Item 69 from file: 53)

DIALOG(R)File 53:FOODLINE(R): Science Sight

(c) 2004 LFRA. All rts. reserv.  
01018979 **FOODLINE** ACCESSION NUMBER: 643942  
The family of peeler-cutters for **fruits** grows.  
Meyer H -L  
RIA (June), (647), 76-77 (0 ref.)  
2004.

PUBLISHER: <http://www.ria.fr>  
ISSN NO: 0035-4244  
LANGUAGE: French  
DOCUMENT TYPE: Journal article  
**FOODLINE** UPDATE CODE: 20040727

ABSTRACT: This article discusses trends and developments in equipment for **fruit** peeling and **cutting**, which has advanced with the growing demand for prepared **fruit** products in French supermarkets, etc. Different types of machines are discussed, along with their suitability for different types of **fruit**, and some examples of equipment are given, including a line for exotic **fruits** and **vegetables** from ABL, an orange peeler and **cutter** from Kronen, a high-speed cuber for delicate **fruits** from Fam and a **water - jet cutter** from Digital Control.

SECTION HEADING: **FRUIT AND VEGETABLE PRODUCTS**

26/7/60 (Item 60 from file: 144)  
DIALOG(R)File 144:Pascal

(c) 2004 INIST/CNRS. All rts. reserv.  
12953174 PASCAL No.: 97-0228661

**Cutting** techniques for minimally processed **vegetables**  
SANGUANSRI P  
Australian **Food** Industry Science Centre, Werribee, Victoria 3030,  
Australia

Journal: **Food** Australia, 1997, 49 (3) 135-138  
ISSN: 1032-5298 Availability: INIST-4957; 354000064387420030  
No. of Refs.: 18 ref.  
Document Type: P (Serial) ; A (Analytic)  
Country of Publication: Australia  
Language: English

This paper is a review of **cutting** techniques applicable for minimally processed **vegetables**, conducted by the Australian **Food** Industry Science Centre, for the Cooperative Research Centre for International **Food** Manufacturing and Packaging Science. The objective was to review existing size reduction technology, its application and consequences on final product quality.

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26/7/13 (Item 13 from file: 51)  
DIALOG(R)File 51:**Food** Sci.&Tech.Abs

(c) 2004 FSTA IFIS Publishing. All rts. reserv.  
00364282 88-10-v0041 SUBFILE: FSTA

Method for **slicing** **fruits** and **vegetables**.

Orr, A.; Spingler, J. O.

DNA Plant Technology Corp.

PATENT CO.: United States Patent 1988

PATENT NO.: US 4 751 094

NOTE: US 792439 (851029) (DNA Plant Technol., Cinnaminson, NJ, USA)

DOCUMENT TYPE: Patent

LANGUAGE: English

An improved method of **slicing** fresh **fruits** and **vegetables** utilizes a high **pressure** fluid **jet** that minimizes bruising throughout the **cut** pieces and tissue damage in the vicinity of the **cut** surface. (See also FSTA (1988) 20 7V77 for closely related patent.) (AS)

File 369:New Scientist 1994-2004/Oct W4  
File 370:Science 1996-1999/Jul W3  
File 16:Gale Group PROMT(R) 1990-2004/Nov 03  
File 160:Gale Group PROMT(R) 1972-1989  
File 148:Gale Group Trade & Industry DB 1976-2004/Oct 15  
File 621:Gale Group New Prod.Annou.(R) 1985-2004/Nov 03  
File 649:Gale Group Newswire ASAP(TM) 2004/Oct 27  
File 20:Dialog Global Reporter 1997-2004/Nov 03  
File 481:DELPHES Eur Bus 95-2004/Oct W3  
File 635:Business Dateline(R) 1985-2004/Nov 02  
File 636:Gale Group Newsletter DB(TM) 1987-2004/Nov 03  
File 98:General Sci Abs/Full-Text 1984-2004/Sep

Set	Items	Description
S1	10708	<b>WATERJET? ? OR WATER()JET? ?</b>
S2	211	<b>HIGH() PRESSURE() STREAM???</b>
S3	2843385	<b>CHEMICAL? ?</b>
S4	177702	<b>ADDITIVE? ?</b>
S5	656432	<b>INFECT? OR PATHOGEN?</b>
S6	5485978	<b>CUT OR CUTS OR CUTTING OR SLICE? ? OR SLICING OR SPLIT????</b>
S7	203108	<b>POTATO?</b>
S8	815059	<b>VEGETABLE? OR FRUIT OR FRUITS</b>
S9	464972	<b>MEAT OR MEATS</b>
S10	6	S1:S2(S)S7
S11	6	RD (unique items)
S12	3	S11 AND S3:S5
S13	5	S11 AND S6
S14	6	S12:S13
<b>S15</b>	<b>6</b>	<b>S11 OR S14</b>
S16	118	S1:S2(S)S8:S9 NOT S10
S17	75	S16(S)S6
S18	2	S17(S)S3:S5
<b>S19</b>	<b>2</b>	<b>RD (unique items)</b>
S20	645482	S1/TI OR S2/TI OR S6/TI
S21	13	(S17 AND S20) NOT S18
S22	12	RD (unique items)
<b>S23</b>	<b>12</b>	<b>Sort S22/ALL/PD,A</b>
S24	5	((S1/TI,DE OR S2/TI,DE OR S6/TI,DE) AND S16) NOT (S10 OR S-18 OR S21)
<b>S25</b>	<b>4</b>	<b>RD (unique items)</b>

15/8/3 (Item 2 from file: 148)

DIALOG(R)File 148:(c)2004 The Gale Group. All rts. reserv.

11507130 SUPPLIER NUMBER: 56972795 (USE FORMAT 7 OR 9 FOR FULL TEXT)

Vlasic consolidates pickle production.(Pickles, Pretzels, Polyols & Prepared Fresh **Foods**)(Vlasic **Foods** International)

Sept, 1999

WORD COUNT: 916 LINE COUNT: 00080

COMPANY NAMES: Vlasic **Foods** International Inc.--Contracts; SSOE Inc.--Contracts

INDUSTRY CODES/NAMES: BUSN Any type of business; **FOOD** **Food**, Beverages and Nutrition

DESCRIPTORS: **Food** industry--Production management; **Food** processing machinery industry--Contracts

GEOGRAPHIC CODES/NAMES: 1USA United States

PRODUCT/INDUSTRY NAMES: 2035200 (Pickled Products); 3551000 (**Food** Products Machinery)

EVENT CODES/NAMES: 613 New orders received;430 Capital expenditures  
NAICS CODES: 311421 **Fruit and Vegetable** Canning; 333294 **Food Product**  
Machinery Manufacturing  
FILE SEGMENT: TI File 148

15/8/5 (Item 1 from file: 20)

DIALOG(R)File 20:(c) 2004 The Dialog Corp. All rts. reserv.  
37430236

Invasion of the Critters: Seemingly harmless marine organisms are wreaking  
havoc on the world's coastal **water** ways, rivers and inland lakes

SECTION TITLE: Science & Technology: Environment

August 23, 2004

WORD COUNT: 1073

PROVINCE/STATE: Parana

SIC CODES/DESCRIPTIONS: 4911 (Electric Services)

NAICS CODES/DESCRIPTIONS: 22111 (Electric Power Generation); 2211  
(Electric Power Generation Transmission & Distribution); 221111  
(Hydroelectric Power Generation); 221 (Utilities)

15/7/2 (Item 1 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

(c)2004 The Gale Group. All rts. reserv.

12680082 SUPPLIER NUMBER: 66029149 (THIS IS THE FULL TEXT)

Flow International announces joint project with Kraft, ConAgra, others.

**Food** Engineering, 72, 9, 24

Sept, 2000

TEXT:

**Waterjet** manufacturer Flow International Corporation has signed agreements with Kraft **Foods**, ConAgra, Procter and Gamble, the U.S. Army Soldier Command, and the National Center for **Food** Safety and Technology at the Illinois Institute of Technology to jointly develop the use of ultrahigh-**pressure** technology to produce high-quality, shelf-stable **food** products. The \$2.3 million, three-year effort -- part of a Department of Defense, Dual Use Science and Technology Program -- will address the regulatory, quality and hardware aspects of the commercial production of **foods** that can be kept for extended periods of time without refrigeration. Development efforts will focus on low-acid, heat-sensitive **foods**, including soups, **potatoes**, and cheese products, for both military and consumer markets.

Our goal is to use ultrahigh-**pressure**, instead of the high heat and long cooking times required for traditional canning, to produce room-temperature, shelf-stable **foods** with nutritional value, flavor, color, and texture unachievable today," said Ron Tarrant, chairman, president and CEO of Flow International, which manufactures ultrahigh-**pressure waterjet** technology for **cutting**, cleaning and **food** safety applications.

The company's Fresher Under **Pressure** food safety system utilizes ultrahigh **pressure**, rather than high temperatures, to destroy food-borne **pathogens** and spoilage microorganisms. Fresher Under **Pressure** is currently used to extend the shelf life of refrigerated products, such as seafood, juices and cold **cuts**. The technology is also used to destroy harmful **bacteria**.

Tarrant urged **food** companies to join Flow and others in their development efforts. Interested companies should contact Dr. Edmund Ting, vice president of research and development at (253) 813-3346 or eting@flowcorp.com.

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15/3,AB,K/6 (Item 1 from file: 98)  
DIALOG(R)File 98:General Sci Abs/Full-Text  
(c) 2004 The HW Wilson Co. All rts. reserv.  
02256575 H.W. WILSON RECORD NUMBER: BGS192006575  
Evaluation of a **water jet** cutting system for **slicing potatoes**.  
Becker, Robert  
Gray, Gregory M  
Journal of **Food Science (J Food Sci)** v. 57 (Jan./Feb. '92) p. 132-7  
DOCUMENT TYPE: Feature Article  
SPECIAL FEATURES: bibl il ISSN: 0022-1147  
LANGUAGE: English  
COUNTRY OF PUBLICATION: United States

19/7/1 (Item 1 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2004 The Gale Group. All rts. reserv.  
03537022 Supplier Number: 44961508  
Using **Water** to **Cut** Products  
**Meat** Processing, p134  
Sept, 1994  
ABSTRACT:  
**Water jet** knives can provide precision-controlled, high-pressure poultry **cutting** to achieve intricacy and a more natural look, according to J Craig Wyvill, senior research engineer at Georgia Tech Research Inst. **Water jet** knives eliminate waste build-up and prevent the transfer of contamination to the **meat**. They can also be safer vs steel knives by eliminating the possibility of operators' hands being pulled into the blade. **Water jet** knives also do not dull from contact with such hard surfaces as bone and **cutting** surfaces. **Water jet** knives, however, have limited penetration of about a few inches, although polymers and abrasive **additives** can increase penetration depth. Used in the poultry processing industry, **water jet** knives can provide more automated production of intricately portioned **cuts**.  
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23/8/4 (Item 4 from file: 636)  
DIALOG(R)File 636:(c) 2004 The Gale Group. All rts. reserv.  
01099448 Supplier Number: 40770386 (USE FORMAT 7 FOR FULLTEXT)  
End-User Report - U.S. End-Users Of **Water Jet** Machine Tools  
May, 1989  
Word Count: 1303  
PUBLISHER NAME: Vital Information Publications  
INDUSTRY NAMES: BUSN (Any type of business); CMPT (Computers and Office Automation); ENG (Engineering and Manufacturing)

23/8/6 (Item 6 from file: 148)  
DIALOG(R)File 148:(c)2004 The Gale Group. All rts. reserv.  
07304635 SUPPLIER NUMBER: 16127322 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Cutting** the fat with electric eyes.  
June, 1994  
WORD COUNT: 541 LINE COUNT: 00040  
SPECIAL FEATURES: illustration; photograph  
INDUSTRY CODES/NAMES: **FOOD Food**, Beverages and Nutrition  
DESCRIPTORS: Electric eye cameras--Usage; **Meat cutting**--Innovations  
PRODUCT/INDUSTRY NAMES: 3551320 (**Meat Cutting Equip**); 3823280 (General

Process Sensors)  
SIC CODES: 3556 Food products machinery; 3823 Process control  
instruments  
FILE SEGMENT: TI File 148

23/8/7 (Item 7 from file: 16)  
DIALOG(R)File 16:(c) 2004 The Gale Group. All rts. reserv.  
03489003 Supplier Number: 44878685 (USE FORMAT 7 FOR FULLTEXT)  
Automatic **waterjet** cutting machine yields standard portions  
August, 1994  
Word Count: 343  
PUBLISHER NAME: Food Technology Intelligence, Inc.  
COMPANY NAMES: \*Lumetech  
EVENT NAMES: \*350 (Product standards, safety, & recalls)  
GEOGRAPHIC NAMES: \*4EUDE (Denmark)  
PRODUCT NAMES: \*3551300 (Industrial Food Products Eqp)  
INDUSTRY NAMES: BIO (Biotechnology); BUSN (Any type of business); **FOOD**  
(Food, Beverages and Nutrition)  
NAICS CODES: 333294 (Food Product Machinery Manufacturing)  
SPECIAL FEATURES: COMPANY

23/8/10 (Item 10 from file: 148)  
DIALOG(R)File 148:(c)2004 The Gale Group. All rts. reserv.  
08652903 SUPPLIER NUMBER: 18260121 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
Appliance design: the 21st century in the kitchen.(student contest at  
Kitchen Aid; **water -jet** cutting baord; table top dishwasher, bladeless  
and cordless blender, and other winning designs)(Emerging  
Technologies)(Brief Article)  
May 6, 1996  
WORD COUNT: 346 LINE COUNT: 00032  
SPECIAL FEATURES: illustration; photograph  
COMPANY NAMES: KitchenAid--Product development  
INDUSTRY CODES/NAMES: BUS Business, General  
DESCRIPTORS: Home appliances--Product development  
PRODUCT/INDUSTRY NAMES: 3630000 (Household Appliances)  
SIC CODES: 3630 Household Appliances  
FILE SEGMENT: MI File 47

23/3,AB,K/2 (Item 2 from file: 160)  
DIALOG(R)File 160:Gale Group PROMT(R)  
(c) 1999 The Gale Group. All rts. reserv.  
01529965  
**FLOW SYSTEMS WATERJETS WELCOMED IN THE COMPETITIVE FOOD INDUSTRY.**  
NEWS RELEASE September 30, 1986 p. 11

Food processors are quietly welcoming the newest weapon in their  
production arsenal -- **waterjet** cutting .The technology, pioneered by  
Flow Systems, Inc., offers canners, packers and processors a tool to reduce  
waste, increase production- line speed and capacity, and increase prodits  
in a competitive industry where profit margins are slim. Flow Systems  
installed its first production **waterjet** cutting system in the food  
industry after several years of research and development, in-plant testing  
by cooperating food processors, and gaining USDA apparoval. The firm's  
equipment also is approved for use with other cutting fluids such as  
**vegetable oils, glycerin and alcohol for water-sensitive foods.** Flow  
Systems now has more than a dozen production-line installations cutting  
foods such as fish, meat , poultry, vegetables , pitted olives, pizza,

granola bars, sheet cake and candy. Within the next five years, the firm predicts that its sales to food processing companies will grow at a 50 percent annual rate.

Full text available on PTS New Product Announcements.

23/3,AB,K/3 (Item 3 from file: 635)  
DIALOG(R)File 635:Business Dateline(R)  
(c) 2004 ProQuest Info&Learning. All rts. reserv.  
0024433 87-03116

**Jet Edge Hopes Its XY-Omega Will Cut**

Neely, Anthony

Minneapolis-St Paul CityBusiness (Minneapolis, MN, US), V4 N16 s1 p7

PUBL DATE: 861119

WORD COUNT: 1,067

DATELINE: Minneapolis, MN, US

TEXT:

...major player in the relatively young **waterjet cutting** industry.

**Jet Edge's XY-Omega** computerized **waterjet cutting** system, the company's first product and the **fruit** of a one-year crash development program, was unveiled in September at the International Machine...

23/3,AB,K/8 (Item 8 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
(c)2004 The Gale Group. All rts. reserv.  
07969988 SUPPLIER NUMBER: 17197304 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
New developments in **cutting** and **slicing** . (food cutting equipment)  
Day, Brian  
**Food** Manufacture, v70, n4, p49(3)  
April, 1995  
ISSN: 0015-6477 LANGUAGE: English RECORD TYPE: Fulltext  
WORD COUNT: 2421 LINE COUNT: 00204

23/3,AB,K/11 (Item 11 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2004 The Gale Group. All rts. reserv.  
04596273 Supplier Number: 46757500

Lean machine **cuts** fat from **meat**.

Photonics Spectra, p120

Oct, 1996

Language: English Record Type: Abstract

Document Type: Magazine/Journal; Trade

ABSTRACT:

Elrad Ltd., of Petach-Tikva, Israel, has created a 3-D scanning and **slicing** machine, called as the CompuScan 300, that control, without human contact, the amount of fat left in **meat**. The development of CompuScan 300 is a response to consumers growing consciousness on sanitation and fat intake. CompuScan is mainly composed of a 3-D vision system and a computerized high-pressure **water-jet cutting** system. Via a camera connected to the vision system, the **meat** is scanned for fat, and 3-D measurements are taken. The data is then relayed to the **water-jet cutter**, which **slices** the fat from the **meat**. With CompuScan, uniformity of the **meat** in volume, size and weight, is achieved.

23/3,AB,K/12 (Item 12 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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09651772 SUPPLIER NUMBER: 18931081 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
Machine vision for **meat** processing: making the **cut** - automatically.

Jacobs, Jonathan

Advanced Imaging, v11, n11, p21(3)

Nov, 1996

ISSN: 1042-0711 LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 1490 LINE COUNT: 00119

... zone, separation between the pure **meat** and, finally, generating a  
**cutting** route for the robot **water - jet cutter** to follow.

The first stage makes use of advanced mathematical morphology and on  
global...

...are fed to the high **pressure Water-Jet Robot Cutter**, consisting of two  
to four **cutting** heads. Application of this technology include removing  
blemished parts, reducing product length to a given length based on chosen  
criteria and removal of bone from fish and **meat**.

Potential

This particular application of Machine Vision has a great future. As  
hygiene and health...

25/7/1 (Item 1 from file: 160)

DIALOG(R)File 160:Gale Group PROMT(R)

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02358060

Two steaks please, robot

Times (London, UK) November 23, 1989 p. 35

UK: The **Meat** and Livestock Commission, a govt agency, has launched a  
GBP1 mil plan to produce the UK's first robot machine to **cut meat** joints.  
The commission will spend up to GBP500k on the first prototype, which will  
be finished by end-1990. Some 200 robots should be finished by 1994. The  
robot butcher, which can work non-stop, is expected to have electronic  
sensors, eyes and arms to lift and position the carcass on the **cutting**  
table, for **cutting** into joints by saws, a rotating knife, or a  
high-**pressure water jet**. The commission hopes the **meat** firms will  
invest an extra GBP500k to produce models to suit their needs.

25/7/3 (Item 2 from file: 148)

DIALOG(R)File 148:Gale Group Trade & Industry DB

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08262374 SUPPLIER NUMBER: 17588646 (THIS IS THE FULL TEXT)

World Wise Technologies subsidiary, BWH delivers prototype to Ontario Hydro

Technologies and enters a joint product development agreement with ESI.

Business Wire, p11091346

Nov 9, 1995

TEXT:

MARKHAM, Ontario--(BUSINESS WIRE)--Nov. 9, 1995--World Wise  
Technologies Inc. is pleased to announce that its subsidiary, BWH  
Technologies Inc. ("BWH") has delivered its first product, a micro-hydro  
personal generator prototype, to Ontario Hydro Technologies (OHT).

OHT is a wholly owned subsidiary of Ontario Hydro, one of North  
America's largest utilities. OHT has acquired the conceptual rights in  
addition to the exclusive marketing rights for the product. BWH retains the  
manufacturing rights.

The product is targeted at campers, boaters, hunters and other outdoor  
recreational consumers. The personal generator will produce up to 500 watts  
of electricity, and is capable of providing sufficient power to operate  
televisions, household lights and battery recharging systems. Weighing

approximately 20 lbs., it can be placed in a **stream**, or clamped to the side of a sailboat.

World Wise Technologies Inc. is also pleased to announce that BWH has entered into a joint Product Development Agreement with Engineering Services Inc. (ESI) to produce an automated, robotic, **water-jet cutting** system for use in the **food** processing industry. The companies intend to focus their initial development efforts on solutions to meet the requirements of the Canadian **meat cutting** industry.

ESI is a spin-off of the highly regarded Robotics and Automation Laboratory (RAL) at the University of Toronto. It is headed by Dr. Andrew Goldenberg (Director of RAL) and has pioneered research and development of flexible, automated robotic solutions. The Robotic Systems developed by ESI and RAL have been implemented by a number of Canadian companies and industries including Ontario Hydro, IBM Canada and Northern Telecom.

Together BWH and ESI will develop an automated **meat cutting** system (AMCS) that will incorporate a twin-arm, omni-directional robotic system directing the **waterjet cutting** nozzles. The product is targeted to be suitable for the poultry, beef and pork industries. Dr. Ananth Seshan, executive vice-president of ESI states that, "the Pork industry alone, represents a \$50 million global business opportunity over the next five years."

CONTACT: Investors Relations & Associates  
416/585-2888/ or 800/785-7915  
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25/7/4 (Item 1 from file: 636)  
DIALOG(R) File 636:Gale Group Newsletter DB(TM)  
(c) 2004 The Gale Group. All rts. reserv.  
01334345 Supplier Number: 41577307 (THIS IS THE FULLTEXT)  
INGERSOLL RAND OFFERS **WATER - JET CUTTING TRIALS**  
Advanced Composites Bulletin, pN/A  
Oct, 1990

TEXT:  
Ingersoll Rand, Bolton, UK, which manufactures specialized **water-jet cutting** equipment, has responded to increased demand for sample **cutting** from its four European laboratories by offering a fast **cutting** service from its operation in The Netherlands.

Straight line **cutting** trials are normally conducted free of charge; complex shapes will incur charges from 60-125/hour, depending on the level of programming required for the computer-controlled **cutting** equipment.

The company reports that this has been a record year for enquiries into **water - jet cutters** that can cope with everything from fish and **meat** to titanium and composites. The company has established a rapid response hotline number for enquiries.

For further information, contact: Ingersoll-Rand Information Centre, Freepost Conrad House, Birmingham Road, Straford-upon-Avon, Warwickshire CV37 0BR, UK; tel (in UK): 0800-444222.

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Subscription: \$219 per year as of 1/92. Published monthly. Contact Elsevier Advanced Technology Publications, Crown House, Linton Road, Barking, Essex, IG11 8JU, U.K. Phone 01-594-7272.  
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File 50: CAB Abstracts 1972-2004/Sep  
File 51: Food Sci. & Tech. Abs 1969-2004/Nov W1  
File 53: FOODLINE(R): Science Sight 1972-2004/Nov 03  
File 79: Foods Adlibra(TM) 1974-2002/Apr  
File 144: Pascal 1973-2004/Oct W4  
File 5: Biosis Previews(R) 1969-2004/Oct W4  
File 285: BioBusiness(R) 1985-1998/Aug W1  
File 94: JICST-EPlus 1985-2004/Oct W1  
File 35: Dissertation Abs Online 1861-2004/Oct  
File 434: SciSearch(R) Cited Ref Sci 1974-1989/Dec  
File 95: TEME-Technology & Management 1989-2004/Jun W1

Set	Items	Description
S1	8272	<b>WATERJET?</b> OR (WATER OR LIQUID) ( ) JET? ? OR HIGH ( ) PRESSURE ( ) - STREAM? ?
S2	1102756	(E OR ESCHERICHIA) ( ) COLI OR STAPHYLOCOCC? OR STREPTOCOCC? - OR COLIFORM? OR SALMONELLA OR LISTERIA OR CAMPYLOBACTER OR PH- YTOPATHOGEN?
S3	7578262	DISEASE? ?
S4	1735156	VIRUS?? OR MICROBE? ? OR MICROBIAL
S5	215190	POTATO?
S6	1070986	VEGETABLE? OR FRUIT OR FRUITS
S7	350822	MEAT OR MEATS
S8	1596460	FOOD
S9	141293	LICING OR SPLIT????
S10	485898	CUT OR CUTS OR CUTTER? ? OR CUTTING OR SLICE? ? OR SLICING
S11	211	S1 AND S2: S4
S12	20	S5: S8 AND S11
S13	6	S9: S10 AND S12
<b>S14</b>	<b>5</b>	<b>RD (unique items)</b>
S15	14	S12 NOT S13
S16	13	RD (unique items)
<b>S17</b>	<b>13</b>	<b>Sort S16/ALL/PY,A</b>
S18	13	S15/TI, DE AND S17
S19	30	(S9: S10 AND S11) NOT S12
S20	28	RD (unique items)
<b>S21</b>	<b>28</b>	<b>Sort S20/ALL/PY,A [not relevant]</b>

14/7,K/4 (Item 2 from file: 53)  
DIALOG(R) File 53: FOODLINE(R): Science Sight  
(c) 2004 LFRA. All rts. reserv.  
00715336 FOODLINE ACCESSION NUMBER: 374609

**New cutting technologies.**

Cohen Maurel E  
Process (1103), 88 (0 ref.)  
1995

ISSN NO: 0998-6650

LANGUAGE: French

DOCUMENT TYPE: Journal article

FOODLINE UPDATE CODE: 19950613

ABSTRACT: A French working group has been looking into the **cutting** and **slicing** of **meat** and bakery products with a view to identifying means of controlling **microbial contamination** and increasing efficiency. This short article reports on the preliminary results of investigations into laser, **water - jet** (Hyperbar) and ultrasound technologies.

14/7,K/5 (Item 3 from file: 53)  
DIALOG(R) File 53: FOODLINE(R): Science Sight

(c) 2004 LFRA. All rts. reserv.  
00315727 FOODLINE ACCESSION NUMBER: 340444  
New technologies in food preservation and processing: Part III.

Williams A

Nutrition and Food Science 2 (March/April), 26-28 (10 ref.)  
1994

LANGUAGE: English

DOCUMENT TYPE: Journal article

FOODLINE UPDATE CODE: 19940426

ABSTRACT: The use of high-voltage electric field processing to reduce **microorganisms** in **food** is briefly described. Research on the applications of pulsed electric fields, as a method of pasteurisation, is summarised. The **antimicrobial** effects of short pulses of intense light are of interest. Inhibition of surface **microbial** and enzymic activity on solid foods, using this method, has been reported. Novel slicing and cutting techniques are briefly outlined, including abrasive water - jet cutting, and laser cutting and peeling. It is reported that the Campden Food RA has reviewed technology transfer opportunities in this area.

SECTION HEADING: PROCESSING

17/6/6 (Item 6 from file: 51)

00686436 94-11-s0026 SUBFILE: FSTA

Comparison of bacteriological parameters in meat production obtained before and after environmental sanitation.  
1994

17/7/7 (Item 7 from file: 53)

DIALOG(R)File 53:FOODLINE(R): Science Sight

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00682676 FOODLINE ACCESSION NUMBER: 427963

Products. (Poultry industry.)

Anon

Poultry International 35 (13), 86-93 (0 ref.)

1996

ISSN NO: 0032-5767

LANGUAGE: English

DOCUMENT TYPE: Journal article

FOODLINE UPDATE CODE: 19970131

ABSTRACT: This section reviews some of the latest equipment, packaging and products for the poultry industry. They include a forming machine, the VM400 HSE from Tetra Laval Koppens; the BI-244P poultry injector from Mepsco Inc.; cartons for chilled liquid egg; Hopperway, a new batch weighing system from Chickway Systems; OMG 800 micropearls for inclusion in hen diets to give omega-3 fatty acid-enriched eggs; the SmartFan AC-V Fan Speed Controller; **waterjet** portioning equipment with automatic fat trimming; and the SimPlate Test for enumeration of **coliforms** and **E. coli**.

SECTION HEADING: PROTEINS

17/7/10 (Item 10 from file: 51)

DIALOG(R)File 51:Food Sci.&Tech.Abs

(c) 2004 FSTA IFIS Publishing. All rts. reserv.

00825741 2001-Rc0426 SUBFILE: FSTA

HACCP - concept of the microbiological quality of fish during processing.

Zivkovic, J.; Miokovic, B.; Sosa, B.

Correspondence (Reprint) address, B. Miokovic, Fac. of Vet. Med., Univ. of Zagreb, 10 000 Zagreb, Croatia

Archiv fuer Lebensmittelhygiene 2001 , 52 (1) 10-13

NOTE: 16 ref.

DOCUMENT TYPE: Journal Article ISSN: 0003-925X

LANGUAGE: English SUMMARY LANGUAGE: German

Studies were carried out to identify the microbiological critical control points during processing of sardines as part of a project to evaluate the bacteriological safety of canned products (fish in oil, fish in tomato sauce), made from fish of the Clupeidae family. There were frequent positive findings for Enterococcus spp., **Escherichia coli** and coagulase-positive **Staphylococcus** in swabs taken from the skin of fish during various processing phases and from work surfaces, indicating a possible risk for production. It is suggested that this risk can be controlled through implementation of HACCP and by vigorous process control which should include phases of steam and hot air cooking (100-130 DEGREE C/30 min) and sterilization (116 DEGREE C/35-50 min). Further recommendations are also made with regard to ice packing, cooling, fast freezing, frozen storage and rapid defrosting using **water jets**.

File 16:Gale Group PROMT(R) 1990-2004/Nov 03  
File 160:Gale Group PROMT(R) 1972-1989  
File 148:Gale Group Trade & Industry DB 1976-2004/Oct 15  
File 20:Dialog Global Reporter 1997-2004/Nov 03  
File 98:General Sci Abs/Full-Text 1984-2004/Sep  
File 636:Gale Group Newsletter DB(TM) 1987-2004/Nov 03  
File 635:Business Dateline(R) 1985-2004/Nov 02

Set	Items	Description
S1	9563	<b>WATERJET?</b> OR (WATER OR LIQUID) ( ) JET? ? OR HIGH ( ) PRESSURE ( ) - STREAM? ?
S2	85922	(E OR ESCHERICHIA) ( ) COLI OR STAPHYLOCOCC? OR STREPTOCOCC? - OR COLIFORM? OR SALMONELLA OR LISTERIA OR CAMPYLOBACTER OR PH- YTOPATHOGEN?
S3	1292176	DISEASE? ?
S4	404816	VIRUS?? OR MICROBE? ? OR MICROBIAL
S5	193918	POTATO?
S6	772569	VEGETABLE? OR FRUIT OR FRUITS
S7	441177	MEAT OR MEATS
S8	3595892	FOOD
S9	854929	LICING OR SPLIT????
S10	4439415	CUT OR CUTS OR CUTTER? ? OR CUTTING OR SLICE? ? OR SLICING
S11	29	S1(S)S2:S4
S12	4	S11(S)S5:S8
S13	5	S11(S)S9:S10
<b>S14</b>	<b>2</b>	<b>S12(S)S13</b>
<b>S15</b>	<b>5</b>	<b>S12:S13 NOT S14</b>
S16	22	S11 NOT S12:S15
S17	19	RD (unique items)
<b>S18</b>	<b>19</b>	<b>Sort S17/ALL/PD,A</b>

14/7/2 (Item 1 from file: 635)  
DIALOG(R)File 635:Business Dateline(R)  
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1068212 00-33526

**FLOW'S HIGH-PRESSURE JETS AIMED AT RAW OYSTERS**

Virgin, Bill  
Seattle Post-Intelligencer (Seattle, WA, US) pE.1  
PUBL DATE: 990505  
WORD COUNT: 411  
DATELINE: Kent, WA, US, Pacific  
TEXT:

Flow International Inc. has assembled something of a dinner menu out of the contracts it has signed for using its **high-pressure** technology to treat food.

The latest addition to the contracts it has signed with companies that make juice and guacamole: Raw oysters.

**Motivatit Seafood in Houma, La., plans to use Flow's high-pressure systems for neutralizing the Vibrio vulnificus bacteria that can be carried in raw oysters.**

Flow, whose main business is **high-pressure water jets** used for industrial cutting and cleaning, has been developing a second business of using high pressure to break up the microorganisms that cause **disease** or spoilage in **food**. The Kent-based company says pressure treating doesn't affect the taste, color and nutritional value of food the way pasteurization with heat can.

In the case of oysters, pressure treatment has an added benefit, said

Rick Marshall, Flow's vice president of corporate market and application development. The pressure helps force open the shell, saving time in shucking the oyster meat.

At the same time, pressure doesn't flatten or disfigure the meat, Marshall said, because the pressure is coming from all directions and because the water content of the food is so high. The oysters are subjected to pressures of 55,000 pounds per square inch for up to two minutes.

"We're very excited about the seafood market," said Marshall, adding that he's had inquiries from other companies in that business.

Before the latest agreement Flow's contracts had been for "pumpable" liquid or semi-liquid foods. By putting together an array of pressure vessels Flow could set up a continuous system (one is filling while one is under pressure and another is emptying).

Marshall said Flow's system can be operated as a batch process, but because manually unloading the container takes time "it's a bit small" to be operated that way.

Still, Flow was able to snare the contract because it could get a unit to Motivatit faster than competitors who build pressure systems.

And with Flow's acquisition of the high-pressure systems division of a Swedish company, it will be able to offer customers like Motivatit larger, batch-style units.

So far Flow's venture into treating food with pressure isn't generating revenue for the company. Stephen Reichenbach, Flow's chief financial officer, said revenues from leases and royalty fees on the units will start making a significant contribution to revenue toward the end of fiscal year 2000, which for Flow started last weekend.

P-I reporter Bill Virgin can be reached at 206-448-8319 or billvirgin@seattle-pi.com

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18/8/12 (Item 12 from file: 20)

DIALOG(R)File 20:(c) 2004 The Dialog Corp. All rts. reserv.  
21966162

Clean & hygienic

March 28, 2002

WORD COUNT: 58

DESCRIPTORS: New Products & Services; Marketing; Company News

FOREIGN AND INTERNATIONAL PATENTS

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200470

File 347:JAPIO Nov 1976-2004/Jun(Updated 041004)

Set	Items	Description
S1	12955	<b>WATERJET? ? OR WATER()JET? ?</b>
S2	249	<b>HIGH()PRESSURE()STREAM???</b>
S3	884759	<b>CHEMICAL? ?</b>
S4	184171	<b>ADDITIVE? ?</b>
S5	87877	<b>INFECT? OR PATHOGEN?</b>
S6	1079665	<b>CUT OR CUTS OR CUTTING OR SLICE? ? OR SLICING OR SPLIT????</b>
S7	19034	<b>POTATO?</b>
S8	116202	<b>VEGETABLE? OR FRUIT OR FRUITS</b>
S9	43732	<b>MEAT OR MEATS</b>
S10	13269	<b>IC=(B26F-003? OR A01C-001? OR A01C-009?)</b>
S11	27	<b>S1:S2 AND S7</b>
S12	2	<b>S3:S5 AND S11</b>
S13	7	<b>S6 AND S11</b>
S14	7	<b>S12:S13</b>
S15	146	<b>(S1:S2 AND S8:S9) NOT S14</b>
S16	2	<b>S3:S5 AND S6 AND S15</b>
S17	108948	<b>DISEASE</b>
S18	0	<b>(S17 AND S6 AND S15) NOT S16</b>
S19	8	<b>S15 AND (S3:S5 OR S17)</b>
S20	6	<b>S19 NOT S16</b>

14/26, TI/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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004527270

WPI Acc No: 1986-030614/198605

Controlled **cutting** using a pressurised fluid **jet** - which is deflected or deformed when **cutting** is not required

14/26, TI/6 (Item 6 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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003879232

WPI Acc No: 1984-024770/198405

**Cutting** device for extruded material - uses pivoted **cutters** individually moved into working position

14/7/3 (Item 3 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

013708913 \*\*Image available\*\*

WPI Acc No: 2001-193137/200120

Simultaneous **slicing** and washing of a raw **vegetable** or **fruit** product, e.g. **potatoes**, involves delivering the product to a **slicer** immersed in a **water** bath, rotating a **slicer** cage, and impelling and removing the **slices**

Patent Assignee: HEAT & CONTROL INC (HEAT-N)

Inventor: BEITSAYADEH C; BROWN D E; CARIDIS A A; MURGEL L P; SILVESTER J

Number of Countries: 028 Number of Patents: 007

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1074187	A2	20010207	EP 2000306322	A	20000725	200120 B



Serial 09/935335

November 3, 2004

AU 200048858	A	20010308	AU 200048858	A	20000726	200120
CA 2314616	A1	20010203	CA 2314616	A	20000802	200120
EP 1074187	A8	20010502	EP 2000306322	A	20000725	200125
JP 2001086970	A	20010403	JP 2000235724	A	20000803	200126
EP 1074187	B1	20040121	EP 2000306322	A	20000725	200410
DE 60007809	E	20040226	DE 607809	A	20000725	200419
			EP 2000306322	A	20000725	

Priority Applications (No Type Date): US 99366659 A 19990803

## Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

EP 1074187 A2 E 10 A23N-015/00

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

AU 200048858 A A23N-012/02

CA 2314616 A1 E A23L-001/212

EP 1074187 A8 E A23N-015/00

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
LI LT LU LV MC MK NL PT RO SE SI

JP 2001086970 A 8 A23N-012/02

EP 1074187 B1 E A23N-015/00

Designated States (Regional): DE GB NL SE

DE 60007809 E A23N-015/00 Based on patent EP 1074187

Abstract (Basic): EP 1074187 A2

NOVELTY - A raw **vegetable** or **fruit** product is simultaneously **sliced** and washed by delivering the **food** product to a centrifugal-type **slicer** (21) having a rotatable cage and **slicing** knives. The **slicer** is immersed in a **water** bath (12), and the **slicer** cage is rotated to force the product through the knives and into the **water** bath. **Slices** (14) are impelled through the **water** (13) and then removed.

USE - The invention is used for simultaneously **slicing** and washing a firm, raw **vegetable** or **fruit** product, e.g. **potatoes**, apples, sweet **potatoes**, cassava, plantains, beets, onions, **water** chestnuts, carrots, turnips, cabbage or sugar beets (claimed). It can also be used for the removal of starch and ruptured cells.

ADVANTAGE - The invention eliminates the separate washing step following **slicing** in **vegetable** processing through combining the **slicing** and washing steps. It effects a savings in processing time and equipment expense. It minimizes **slice** overlap, thus reducing the tendency to form clumps of the **sliced** product in subsequent frying steps. It provides for the complete removal of **slices** from the **slice**-washing bath irrespective of the vortexes or turbulence.

DESCRIPTION OF DRAWING(S) - The figure shows a perspective view of the **vegetable slicing** and washing apparatus.

**Water** bath (12)**Water** (13)**Slices** (14)**Slicer** (21)

pp; 10 DwgNo 1/6

Derwent Class: D14; P43; P62

International Patent Class (Main): A23L-001/212; A23N-012/02; A23N-015/00

International Patent Class (Additional): A23L-001/216; B08B-003/02;

B08B-003/10; B26D-001/36; B26D-003/26; B26D-007/06

14/7/4 (Item 4 from file: 350)

DIALOG(R) File 350:Derwent WPIX

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007144561

WPI Acc No: 1987-144558/198721

**Slicing fruits and vegetables** - using high pressure fluid jet

Patent Assignee: DNA PLANT TECHN (DNAP-N)

Inventor: ORR A; SPINGLER J O

Number of Countries: 015 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 223111	A	19870527	EP 86114896	A	19861027	198721 B
US 4751094	A	19880614	US 85792439	A	19851029	198826
CA 1274752	A	19901002				199045

Priority Applications (No Type Date): US 85792439 A 19851029

Cited Patents: EP 39958; FR 2433453; US 2018926; US 2437637; US 3351113; US 3704966; US 3811795; US 4145681; US 4496515

Patent Details:

Patent No	Kind	Lang	Pg	Main IPC	Filing Notes
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EP 223111	A	E	12		
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Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

US 4751094	A		4		
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Abstract (Basic): EP 223111 A

Method comprises using a **water jet** discharging from an orifice at 30,000-50,000 psi **pressure** to **cut** a fresh **fruit** or **vegetable** so as to minimise bruising throughout the **cut** pieces and tissue damage at the **cut** surfaces.

USE/ADVANTAGE - The **cutting** method is partic. useful for **vegetables** such as carrots (claimed), celery (claimed), cucumber, green pepper, lettuce, cabbage, **potatoes**, turnips, rutabaga, string beans, radishes, rhubarb and swiss chard, and **fruits** such as oranges, **grapefruit**, lemons, limes, apples, pears, pineapples, cantaloupes, honeydew melons and **water** melons. Tissue damage due to compression and tearing is minimised. The shelf life of the **cut fruit** or **vegetables** is prolonged. Microbial and enzymatic damage is slowed down due to the formation at the **cut** surfaces of a very thin dry layer.

0/0

Abstract (Equivalent): US 4751094 A

Improved method of **cutting** a fresh **fruit** and **vegetable** comprises contacting with a **water jet** discharged from an orifice at 30,000-50,000 psi to **cut fruit** or **vegetable** into pieces, such that bruising and damage to tissue near the **cut** surface is minimised throughout. Pref. **water jet** discharges from orifice of dia. 0.003-0.012 ins.

USE - To **cut** carrots or celery, or other fresh root **vegetables**, leafy **vegetables**, or those having firm tissue. **Fruits** (e.g. oranges, **grapefruits**, lemon, etc) can be similarly treated. (4pp)

Derwent Class: D13; P62

International Patent Class (Additional): A23L-001/21; B26F-003/00

14/7/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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000786312

WPI Acc No: 1971-27976S/197116

Method of producing dehydrated **potato** - flakes

Patent Assignee: OVERTON MACHINE CO (OVE -N)

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 3574643	A					197116 B

Priority Applications (No Type Date): US 67646023 A 19670614

Abstract (Basic): US 3574643 A

Raw potatoes are immersed in an aqueous 4-10 wt.% caustic soln. heated to 185-212 degrees F for 1-5 minutes and then removed while retaining a film of solution on the potatoes, the potatoes are kept for 5-30 minutes in the coated state to impregnation and then water jets are played on then to remove the skins. The potatoes are neutralised with acid, sliced, pre-cooked, cooled, cooked, riced, dried and packaged. Preferably they are preheated to 155-185 degrees F for 1-5 minutes before being immersed in caustic solution. The method and apparatus for carrying out the process results in greater economy, the wash water, caustic solution and heating fluids being recirculated.

Derwent Class: D13

International Patent Class (Additional): A23B-007/02

16/7/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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007161475

WPI Acc No: 1987-158484/198723

Fresh celery processing to extend shelf life - by packaging cooled sections of selected petioles in sealed container

Patent Assignee: DNA PLANT TECHNOLOGY CORP (DNAP ); DNA PLANT TECHNOL (DNAP-N); DNA PLANT TECHN COR (DNAP-N)

Inventor: ORR A; SPINGLER J O; SPRINGLER J O

Number of Countries: 016 Number of Patents: 008

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 224713	A	19870610	EP 86114898	A	19861027	198723 B
JP 62138135	A	19870620	JP 86258067	A	19861029	198730
US 4711789	A	19871208	US 85792338	A	19851029	198751
US 4753808	A	19880628	US 87114819	A	19871029	198828
EP 224713	B	19910828				199135
DE 3681126	G	19911002				199141
ES 2025050	B	19920316				199216
CA 1307698	C	19920922	CA 521268	A	19861023	199244

Priority Applications (No Type Date): US 85792338 A 19851029

Cited Patents: A3...8811; GB 2050143; No-SR.Pub; US 3795749; US 4001443

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
EP 224713	A	E 8		

Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

US 4711789	A	5
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US 4753808	A	8
------------	---	---

EP 224713	B	
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Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

CA 1307698	C	A23B-007/14
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Abstract (Basic): EP 224713 A

Process comprises selecting petioles from a vegetable and subdividing before cooling in water at 1 deg.C. Cooled petiole sections are packaged in an envelope which prevents microbial recontamination. The petioles are selected to have physiological and chemical properties characteristic of the vegetable in its mature state and the chilling process lasts for 2-5 mins.

Petioles are selected to have a protein content of 0.98% w/w and an ash of less than 0.85% w/w. The physiological properties of the petioles are a lack of pithiness and 9-12 tissue cells per mm. Selected petiole is **cut** by a razor-thin blade which follows a sawing motion. Alternatively, the **cutting** is performed by a **water jet** with a 0.008 inch orifice operated at 40000 psi.

Pref. the packaging envelope is foamed polypropylene with a gas permeability of 50-300 cc O<sub>2</sub> per 100 sq. inch per 24 hrs.; 200-800 cc CO<sub>2</sub> per 100 sq. inch per 24 hrs.; and a moisture transmission rate of 1.5 gms/100 sq.in/24 hrs. at 70 deg.F and 90% RH.

USE/ADVANTAGE - The **vegetable** used is celery and process extends its shelf-life.

0/0

Abstract (Equivalent): EP 224713 B

A process to maintain in a viable form a fresh **vegetable** having enlarged petioles as a predominant feature which comprises; (a) selecting a petiole of a **vegetable** enlarged petioles as a predominant feature, said petiole having **chemical** and physiological properties characteristic of the petioles of the **vegetable** in its market mature state, which provide acceptable shelf life, the **chemical** properties including protein of about 0.98% by weight and above and ash of less than about 0.85% by weight, and the physiological properties including tissue cells having a size of about 9 to about 12 cells per mm and a lack of pithiness in the **cut** surface of the petiole, (b) **cutting** said selected petiole into pieces in a manner effective to minimise bruising throughout the **cut** pieces and damaging of tissue in the vicinity of the **cut** surfaces, (c) contacting said petiole pieces with **water** at about 1deg.C to about ambient temperature for about 2 to about 5 minutes, (d) removing surface **water** from said petiole pieces, and (e) packaging said petiole pieces in a sealed container effective to prevent microbial recontamination of said petiole pieces, said container having a gas permeability and a ratio of the mass of said petiole pieces to the container surface effective to maintain said petiole pieces in a viable condition, the gas permeability being about 50 to about 300 cm<sup>3</sup> of O<sub>2</sub>/645 cm<sup>2</sup> (100 in<sup>2</sup>) - atm. - 24 hrs., about 200 to about 88 cm<sup>3</sup> of CO<sub>2</sub>/645 cm<sup>2</sup> (100 in<sup>2</sup>) - atm. - 24 hrs., and a moisture transmission rate of less than about 1.5 g/645 cm<sup>2</sup> (100 in<sup>2</sup>) - 24 hrs. - 90% R.H., 21.1 deg.C (70deg.

Abstract (Equivalent): US 4753808 A

Improved packaged **vegetable** prod. comprises a shelf-stable fresh **vegetable** having enlarged petioles or the main feature. Prepn. comprises (a) selecting petiole having **chemical** and physiological properties in its market mature state providing acceptable shelf life; (b) **cutting** it into pieces so as to minimise bruising and damage to tissue near **cut** surface; (c) contacting pieces with **water** at 1 deg.C to ambient temp. for 2-5 mins; (d) removing surface **water**; and (e) packaging the pieces in a sealed container to prevent microbial recontamination. **Chemical** properties of petiole include 0.98 wt% protein and less than 0.85 wt% ash; and physiological properties include tissue cell size of 9-12 cells per mm. and lack of pithiness in **cut** surface. Container has gas permeability and ratio of pieces to container surface to maintain pieces in a viable condition. Gas permeability is 50-300 cc O<sub>2</sub> per 100 sq.in.atmos. 24 hrs; and moisture transmission rate less than 1.5 g per 100 sq.in. 24 hrs. 90% relative humidity 70 deg.C. Ratio mass of pieces to container surfaces is 1-6 g per sq.in.

USE - For packaging celery. (8pp)r

US 4711789 A

Fresh **vegetable** having enlarged particles is maintained in viable form by (a) **cutting** selected petiole so as to minimise bruising throughout the piece and damaging tissue near the **cut** surface; (b) contacting pieces with **water** at 1 deg.C to ambient temp. for 2-5 mins; removing surface **water** from pieces, and (d) packaging pieces in a sealed container to prevent microbial contamination. Petioles have **chemical** and physiological properties characteristic of those of the **vegetable** in its market mature state which provide acceptable shelf life, contg. 0.98 wt.% or more of protein and less than 0.85 wt.% of ash, having 9-12 tissue cells per mm and lack of pithiness in the **cut** surface. Container has gas permeability and ratio of mass of petiole pieces: container surface in amt. to maintain pieces viably. Gas permeability is 50-300 -c O<sub>3</sub> per 100 sq. in atmos. 24 hrs.; 200-800 cc CO<sub>2</sub> per 100 sq.in-atmos-24 hrs., and moisture transmission rate of less than 1.5g per 100 sq.in. 24 hrs-90% relative humidity at 70 deg.C. Ratio of mass of petiole pieces: container surface is 1-6 g per sq. in..

USE - To maintain raw celery in viable form. (5pp)i

Derwent Class: A92; D13; Q31

International Patent Class (Main): A23B-007/14

International Patent Class (Additional): A23L-001/21; A23L-001/212;

B65B-025/02; B65B-031/00

16/7/2 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

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01200974 \*\*Image available\*\*

APPARATUS FOR AUTOMATIC CLEANING OF **VEGETABLE**

PUB. NO.: 58-138374 [JP 58138374 A]

PUBLISHED: August 17, 1983 (19830817)

INVENTOR(s): TANABE YOSHIKI

APPLICANT(s): ENDO SEIJIYUU TOMONOKAI KK [000000] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 57-020834 [JP 8220834]

FILED: February 10, 1982 (19820210)

ABSTRACT

PURPOSE: To carry out the automatic cleaning of **vegetables**, aseptically, by connecting a unit for rough washing with **water**, a unit for washing with a **chemical** solution, and a unit for the final washing with **water** in series. CONSTITUTION: Properly **cut vegetables** 10 are put through the inlet 23 into the chute 11, and dropped into the **water** in the unit 17 for the rough washing with **water** by the **water jet** ejected through the **jet** nozzle 6. The **vegetables** are roughly washed by the **water jets** from the upper and the lower nozzles 12, 12' and transferred by the conveyor 13 to the unit 18 for washing with a **chemical** solution. In the unit 18, the **vegetables** are washed by the **jet of chemical solution** ejected through the nozzles 12, 12, and transferred by the conveyor 13 to the unit 19 for the final washing with **water**. The **vegetables** washed with the **water jet** through the nozzles 12, 12' in the final washing unit 19 is discharged by the conveyor 13 through the outlet 24.

20/26,TI/5 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

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07742043

CLEANING, STERILIZING, AND DEODORIZING METHOD FOR **FOODSTUFF**, CLOTH, OR EQUIPMENT, AND CLEANING, STERILIZING, AND DEODORIZING DEVICE

20/26, TI/6 (Item 2 from file: 347)

DIALOG(R) File 347: JAPIO

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01296263

IMPROVEMENT OF **WATER JET** PUMP TYPE VACUUM COOLING METHOD FOR **FOOD** SUCH AS **VEGETABLE**

20/7/1 (Item 1 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.

014030296 \*\*Image available\*\*

WPI Acc No: 2001-514510/200156

New pyrrolecaboxamide and pyrrolethioamide derivatives useful for protecting plants against phytopathogenic fungi, bacteria and viruses  
Patent Assignee: SYNGENTA PARTICIPATIONS AG (SYGN ); SCHNEIDER H (SCHN-I); WALTER H (WALT-I); SYNGENTA CROP PROTECTION INC (SYGN )

Inventor: SCHNEIDER H; WALTER H

Number of Countries: 095 Number of Patents: 014

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200153259	A1	20010726	WO 2001EP592	A	20010119	200156 B
AU 200135433	A	20010731	AU 200135433	A	20010119	200171
BR 200107738	A	20021022	BR 20017738	A	20010119	200278
			WO 2001EP592	A	20010119	
CZ 200202496	A3	20021016	WO 2001EP592	A	20010119	200279
			CZ 20022496	A	20010119	
EP 1252140	A1	20021030	EP 2001907468	A	20010119	200279
			WO 2001EP592	A	20010119	
KR 2002079791	A	20021019	KR 2002709359	A	20020720	200316
HU 200203960	A2	20030328	WO 2001EP592	A	20010119	200333
			HU 20023960	A	20010119	
JP 2003520269	W	20030702	JP 2001553263	A	20010119	200352
			WO 2001EP592	A	20010119	
CN 1427823	A	20030702	CN 2001806478	A	20010119	200361
US 20040049035	A1	20040311	WO 2001EP592	A	20010119	200419
			US 2002181702	A	20021008	
ZA 200205641	A	20040128	ZA 20025641	A	20020715	200420
US 20040106521	A1	20040603	US 2002181702	A	20021008	200436
			US 2003680346	A	20031007	
AU 772635	B2	20040506	AU 200135433	A	20010119	200460
US 6806286	B2	20041019	WO 2001EP592	A	20010119	200469
			US 2002181702	A	20021008	

Priority Applications (No Type Date): GB 20001447 A 20000121

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200153259 A1 E 111 C07D-207/40

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW

Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR

IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW  
 AU 200135433 A C07D-207/40 Based on patent WO 200153259  
 BR 200107738 A C07D-207/40 Based on patent WO 200153259  
 CZ 200202496 A3 C07D-207/40 Based on patent WO 200153259  
 EP 1252140 A1 E C07D-207/40 Based on patent WO 200153259  
 Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT  
 LI LT LU LV MC MK NL PT RO SE SI TR  
 KR 2002079791 A C07D-417/12  
 HU 200203960 A2 C07D-207/40 Based on patent WO 200153259  
 JP 2003520269 W 121 C07D-207/34 Based on patent WO 200153259  
 CN 1427823 A C07D-207/40  
 US 20040049035 A1 C07D-417/02  
 ZA 200205641 A 118 C07D-000/00  
 US 20040106521 A1 A01N-043/80 Div ex application US 2002181702  
 AU 772635 B2 C07D-207/40 Previous Publ. patent AU 200135433  
 Based on patent WO 200153259  
 US 6806286 B2 C07D-409/14 Based on patent WO 200153259  
 Abstract (Basic): WO 200153259 A1

NOVELTY - Pyrrolecarboxamide and pyrrolethioamide derivatives (I) are new.

DETAILED DESCRIPTION - Pyrrolecarboxamide and pyrrolethioamide compounds of formula (I) are new.

X=O or S;

R1=optionally substituted 1-4C alkyl, except CF3, optionally substituted 3-5C cycloalkyl, or halo;

R2=H, optionally substituted 1-4C alkyl, optionally substituted 1-4C alkoxy, CN or halo;

R3=optionally substituted 1-4C alkyl, and

A=orthosubstituted aryl, orthosubstituted heteroaryl, optionally substituted bicycloaryl, or optionally substituted bicycloheteroaryl.

INDEPENDENT CLAIMS are included for the following:

(1) preparation of (I), and

(2) pyrrole carboxylic acid derivatives of formula (X).

ACTIVITY - Fungicidal; antibacterial; virucide; pesticidal.

Tests are described but no results are given.

MECHANISM OF ACTION - None given.

USE - Used for controlling microorganisms and preventing attack and infestation of plants, particularly for controlling or preventing infestation of cultivated plants by phytopathogenic microorganisms (claimed). (I) Can be used to inhibit or destroy pests that occur on plants or parts of plants ( **fruit** , blossoms, leaves, stems, tubers, roots) of different crops of useful plants, while at the same time protecting also those parts of the plants that grow later. (I) May also be used as dressing agents for the treatment of plant propagation material, in particular of seeds ( **fruit** , tubers, grains) and plant **cuttings** (e.g. rice), for the protection against fungal **infections** as well as against phytopathogenic fungi occurring in the soil.

(I) Are effective against phytopathogenic fungi of the following classes: Fungi imperfecta (e.g. Botrytis, Pyricularia, Helminthosporium, Fusarium, Septoria, Cercospora, and Alternaria) and Basidiomycetes (e.g. Rhizoctonia, Hemileia, Puccinia). (I) Are also effective against the Ascomycetes classes (e.g. Venturia and Erysiphe, Podosphaera, Monilinia, Uncinula) and of the Oomycetes classes (e.g. Phytophthora, Pythium, Plasmopara), particularly powdery mildew (Erysiphe spp). (I) Are also effective against phytopathogenic bacteria and viruses (e.g. Xanthomonas spp., Pseudomonas spp., Erwinia amylovora

and against the tobacco mosaic virus).

ADVANTAGE - (I) Have good activity at low rates of application and are well tolerated by plants and are environmentally safe.

pp; 111 DwgNo 0/0

Derwent Class: C02

International Patent Class (Main): A01N-043/80; C07D-000/00; C07D-207/34; C07D-207/40; C07D-409/14; C07D-417/02; C07D-417/12

International Patent Class (Additional): A01N-043/36; A01N-043/40; A01N-043/74; A01N-043/828; C07D-401/12; C07D-403/02; C07D-403/12; C07D-405/02; C07D-405/12; C07D-407/12; C07D-409/02; C07D-409/12; C07D-413/02; C07D-413/12; C07D-413/14; C07D-417/14

20/7/2 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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013086009

WPI Acc No: 2000-257881/200023

Abrasive powder or aqueous cleaning agent for hard surfaces comprising sodium bicarbonate, sodium chloride and/or sugar, **water** soluble polymeric polycarboxylate as dispersing agent, chelating agent and/or surfactant

Patent Assignee: BAYER AG (FARB )

Inventor: MENZEL T; TRAENCKNER H; WENDT H

Number of Countries: 029 Number of Patents: 006

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
DE 19842054	A1	20000316	DE 1042054	A	19980915	200023	B
EP 987318	A1	20000322	EP 99116838	A	19990902	200023	
JP 2000096092	A	20000404	JP 99254273	A	19990908	200027	
CA 2281853	A1	20000315	CA 2281853	A	19990910	200035	
MX 9908452	A1	20000801	MX 998452	A	19990914	200137	
US 6524392	B1	20030225	US 99393178	A	19990909	200323	
			US 2000525136	A	20000314		

Priority Applications (No Type Date): DE 1042054 A 19980915

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

DE 19842054 A1 6 C11D-003/37

EP 987318 A1 G C11D-003/37

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT

LI LT LU LV MC MK NL PT RO SE SI

JP 2000096092 A 7 C11D-007/26

CA 2281853 A1 E C11D-003/37

MX 9908452 A1 C11D-001/83

US 6524392 B1 C23G-001/02 Div ex application US 99393178

Abstract (Basic): DE 19842054 A1

NOVELTY - Cleaning agent based on NaHCO<sub>3</sub>, NaCl and/or sugar together with a **water**-soluble polymeric polycarboxylate as dispersing agent, a chelating agent and/or a surfactant.

DETAILED DESCRIPTION - Cleaning agent based on Na bicarbonate, Na chloride and/or sugar as carrier which contains in the form of a powder or an aqueous formulation (a) a **water**-soluble polymeric polycarboxylate (I) as dispersing agent, (b) a chelating agent and/or (c) a surfactant.

USE - The agents are useful for the abrasive cleaning of hard surfaces e.g. of metals, masonry, building facades, etc., to remove adherent deposits of dirt on the surface e.g. mineral, **vegetable** and animal oils, fats, waxes, salts, ash, powders, granules, dust, pigments, fillers, carbon black, tar, organic polymers, etc., using a



dry sand blasting or water jet stream application technique with or without compressed air.

ADVANTAGE - The compositions give excellent penetration through the dirt layer, wetting of the surface to be cleaned, lifting of the deposited dirt and good entrainment and removal of the dislodged dirt away from the surface being cleaned. The ingredients of the composition are environmentally benign and represent no hazards to the health of personnel working with the material.

pp; 6 DwgNo 0/0

Derwent Class: A14; A97; D25

International Patent Class (Main): C11D-001/83; C11D-003/37; C11D-007/26;  
C23G-001/02

International Patent Class (Additional): C11D-001/14; C11D-001/72;  
C11D-003/10; C11D-007/10; C11D-007/12; C11D-007/32; C11D-017/06;  
C11D-017/08

File 348:EUROPEAN PATENTS 1978-2004/Oct W04

File 349:PCT FULLTEXT 1979-2002/UB=20041028,UT=20041021

Set	Items	Description
S1	6568	<b>WATERJET? ? OR WATER()JET? ?</b>
S2	409	<b>HIGH()PRESSURE()STREAM???</b>
S3	439357	<b>CHEMICAL? ?</b>
S4	193654	<b>ADDITIVE? ?</b>
S5	124325	<b>INFECT? OR PATHOGEN?</b>
S6	463264	<b>CUT OR CUTS OR CUTTING OR SLICE? ? OR SLICING OR SPLIT????</b>
S7	28273	<b>POTATO?</b>
S8	72636	<b>VEGETABLE? OR FRUIT OR FRUITS</b>
S9	18449	<b>MEAT OR MEATS</b>
S10	162785	<b>DISEASE? ?</b>
S11	1185	<b>IC=(B26F-003? OR A01C-001? OR A01C-009?)</b>
S12	15	<b>S1:S2(S)S7</b>
S13	1	<b>(S3:S5 OR S10)(S)S12</b>
S14	8	<b>S6(S)S12</b>
<b>S15</b>	<b>8</b>	<b>S13 OR S14</b>
<b>S16</b>	<b>7</b>	<b>S12 NOT S15</b>
S17	62	<b>S1:S2(S)S8:S9 NOT S12</b>
<b>S18</b>	<b>3</b>	<b>(S3:S5 OR S10)(S)S17</b>
S19	33	<b>S6(S)S17</b>
S20	32	<b>S19 NOT S18</b>
<b>S21</b>	<b>3</b>	<b>S11 AND S20</b>

15/3,AB,K/1 (Item 1 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01508519

FROZEN **POTATO** PRODUCT AND PRODUCTION METHOD THEREFOR

GEFRORENES KARTOFFELPRODUKT UND HERSTELLUNGSVERFAHREN DAFUR

PRODUIT DE POMME DE TERRE CONGEELE ET PROCEDE DE PRODUCTION

PATENT ASSIGNEE:

Trade Deshida, S.L., (4227640), C/ Golondrina, 12, 28023 Aravaca, (ES),  
(Applicant designated States: all)

INVENTOR:

ROMERO OLMEDO, Matias, C/ Golondrina, 12, E-28023 Aravaca, (ES)

LEGAL REPRESENTATIVE:

Elzaburu, Alberto de et al (53433), Elzaburu S.A. Miguel Angel, 21, 28010  
Madrid, (ES)

PATENT (CC, No, Kind, Date): EP 1374689 A1 040102 (Basic)

WO 2002076221 021003

APPLICATION (CC, No, Date): EP 2002714228 020320; WO 2002ES132 020320

PRIORITY (CC, No, Date): ES 20100707 010327; ES 20102413 011031

DESIGNATED STATES: AT; BE; CH; CY; DE; DK; ES; FI; FR; GB; GR; IE; IT; LI;  
LU; MC; NL; PT; SE; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS: A23B-007/04; A23B-007/153

ABSTRACT EP 1374689 A1

A description is given of a novel frozen **potato**, similar to fresh **potato** but with a lower starch content and retaining a lower quantity of oil when fried than par-fried frozen **potatoes** that exist on the market. To this end, the **potatoes** undergo a treatment in a saline solution followed later, or in the actual previous stage, by the addition of a **food preservative/anti-oxidant**, which treatments may optionally be followed by stages of drying with hot air, addition of a color

homogenizer, basifying and structure stabilizer for the **potato**, cooling in a solution with optional addition of **food** colors and/or flavors, according to the different variant embodiments of the general process that are considered, and all the aforesaid previously undergoing a stage of drying by means of laminar airflow, prior to their freezing. This type of **potato** may be used in catering in general, being particularly recommended for its low calorie content.

ABSTRACT WORD COUNT: 153

NOTE: Figure number on first page: 1

LANGUAGE (Publication,Procedural,Application): English; English; Spanish

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
----------------	----------	--------	------------

CLAIMS A	(English)	200401	960
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SPEC A	(English)	200401	6251
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Total word count - document A	7211
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Total word count - document B	0
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Total word count - documents A + B	7211
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...SPECIFICATION manufacturing diagram in Fig. 1.

Preliminary stages (1-5)

The preliminary stages of preparing the **potato** are those of washing, peeling, selecting, **cutting**, partial destarching (which, according to the **cutting** method used, may take place at the same time as the **cutting** operation, as is the case of **cutting** using a **water jet**) and stage-two selecting to eliminate marks. All these stages are common and are carried...

15/3,AB,K/3 (Item 3 from file: 348)

DIALOG(R) File 348:EUROPEAN PATENTS

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00816507

Process and automatic apparatus for preparing fried **potato** product from dehydrated **potato**

Verfahren und automatisches Gerat zum Bereiten von fritierten Kartoffeln aus trockenen Kartoffeln

Methode et appareil automatique pour preparer des patates frites a partir de patates deshydratees

PATENT ASSIGNEE:

Kovacs, Laszlo, (1149101), 1310 E- Ocean BLVD., Long Beach, California, (US), (applicant designated states:

AT;BE;CH;DE;DK;ES;FR;GB;IE;IT;LI;NL;SE)

Stark, Eberhard, (2017510), Eichbuhlerstrasse 14, 9545 Wangi/Thurgau, (CH), (applicant designated states:

AT;BE;CH;DE;DK;ES;FR;GB;IE;IT;LI;NL;SE)

Szarka, Karoly, (2017530), Zrinyi u. 3, 2000 Szentendre, (HU), (applicant designated states: AT;BE;CH;DE;DK;ES;FR;GB;IE;IT;LI;NL;SE)

INVENTOR:

Kovacs, Laszlo, 1310 E- Ocean BLVD., Long Beach, California, (US)

Stark, Eberhard, Eichbuhlerstrasse 14, 9545 Wangi/Thurgau, (CH)

Szarka, Karoly, Zrinyi u. 3, 2000 Szentendre, (HU)

LEGAL REPRESENTATIVE:

Cohausz & Florack (100244), Patentanwalte Kanzlerstrasse 8a, 40472 Dusseldorf, (DE)

PATENT (CC, No, Kind, Date): EP 758538 A1 970219 (Basic)

APPLICATION (CC, No, Date): EP 95112568 950810;

PRIORITY (CC, No, Date): EP 95112568 950810

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; IE; IT; LI; NL; SE

INTERNATIONAL PATENT CLASS: A47J-037/12  
ABSTRACT EP 758538 A1

This invention is related to a process and automatic apparatus of novel system concept for delivering formatted, freshly fried **potato** products from dehydrated **potato**. The process comprises the steps of measuring the temperature of frying oil during the frying time; computing the introduced energy amount by integrating the temperature of frying oil on frying time; and determining the termination of frying time on the term that said introduced energy amount equals to a predetermined constant value.

The apparatus according to the present invention comprises at least two temperature sensors located on different height levels in the frying unit (7); a unit to average the signals of said temperature sensors during frying time and to integrate the averaged temperature of the frying oil on the frying time, and thereby computing the amount of the introduced energy. Said unit controls the interruption of frying in case of attaining a predetermined constant amount of energy to be introduced.

ABSTRACT WORD COUNT: 156

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB97	542
SPEC A	(English)	EPAB97	3002
Total word count - document A			3544
Total word count - document B			0
Total word count - documents A + B			3544

...SPECIFICATION ring of the cup 34 and from the closing plate 35 by means of cold **water jet**. It will be noted here that the good cleanability of the parts contacting with the **potato** product is an important requirement. In prior art apparatuses the fulfillment of this requirement met...

15/3,AB,K/4 (Item 4 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00735594

**Vegetable cutting system**

Gemuseschneidesystem

Systeme pour la coupe de legumes

PATENT ASSIGNEE:

McCain **FOODS LIMITED**, (1315150), , Florenceville, New Brunswick E0J 1K0, (CA), (Proprietor designated states: all)

INVENTOR:

Frey, Max, 3940 Southwest Altadena, Portland, Oregon 97201, (US)

Frey, Marc A., 2321 S. Iowa Street, Portland, Oregon 97201, (US)

Smith, Peter C., Rural Route No.1, Florenceville, New Brunswick E0K 1J0, (CA)

Brooks, Darrell B., Rural Route No.1, Stickney, New Brunswick, E0J 1X0, (CA)

LEGAL REPRESENTATIVE:

Chettle, Adrian John (50862), Withers & Rogers, Goldings House, 2 Hays Lane, London SE1 2HW, (GB)

PATENT (CC, No, Kind, Date): EP 693348 A1 960124 (Basic)  
EP 693348 B1 000531

APPLICATION (CC, No, Date): EP 94305326 940720;

PRIORITY (CC, No, Date): EP 94305326 940720

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;

NL; PT; SE

INTERNATIONAL PATENT CLASS: B26D-007/06; B26D-007/01; B65G-053/30

ABSTRACT EP 693348 A1

Potatoes are conveyed one at a time along a predetermined path (37) ending at a cutter (150) that cuts the potatoes into helical strips. A series of four rings (40,50,60,70) surrounds the path. Each ring has a plurality of nozzles (90) that produce jets of water intersecting at a point in the path. At the outlet of the series of four rings (40,50,60,70) is an orienter (140) through which the potatoes pass. The rings (40,50,60,70) and the orienter (140) align and guide the potatoes as they move along the path (37) and through the cutter (150). (see image in original document)

ABSTRACT WORD COUNT: 116

NOTE: Figure number on first page: 6

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	200022	637
CLAIMS B	(German)	200022	686
CLAIMS B	(French)	200022	760
SPEC B	(English)	200022	3853
Total word count - document A			0
Total word count - document B			5936
Total word count - documents A + B			5936

15/3,AB,K/5 (Item 1 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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01112084

APPARATUS FOR CUTTING FOOD PRODUCT

TRANCHEUSE ALIMENTAIRE

Patent Applicant/Assignee:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200433168 A2-A3 20040422 (WO 0433168)

Application: WO 2003US31704 20031007 (PCT/WO US03031704)

Priority Application: US 2002416653 20021007; US 2003605543 20031007

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE EG ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK  
LR LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC  
SD SE SG SK SL SY TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE  
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 4877

English Abstract

A food product cutting apparatus (10) that makes a substantially horizontal cut through food product being delivered in a substantially vertical direction. The food product delivered to a cutting device (12) through an internal passage (24) of at least one feed member (22) above the cutting device. A force is applied to the food product traveling downward through the internal passage (24) so as to push the food product against a first wall (26) of the feed member (22). The apparatus is configured to improve product flow by configuring the passage (24) of the feed member (22) to have a cross-sectional shape defined by two offset, overlapping diameters. The apparatus is also configured for improved safety by ensuring that the cutting device (10) is properly secured before electrical power is available for driving the cutting device (10).

Fulltext Availability: Detailed Description

Detailed Description

... lowered.

DETAILED DESCRIPTION OF THE INVENTION

[0017] Figures 1 through 5 show portions of a cutting ( slicing ) machine

10 having a horizontal cutting wheel 12 equipped with multiple blades, and feed tubes 22 mounted above the wheel 12 for delivering products, such as potatoes, for slicing. Each feed tube 22 has an internal passage 24 that is sized such that products (e.g., round and/or elongate potatoes) are fed single-file to the cutting wheel 12. As shown in Figure 2, and in accordance with copending U.S. Patent...

...494, each feed tube 22 is equipped with nozzles 58 that discharge fluid (e.g., water ) jets 52 for holding product against a first wall 26 of the tube 22. The nozzles...

...intersect at or near the first wall 26 directly above the exit point of the cutting wheel blades as they pass beneath the tube opening 34 while moving in a direction...

15/3,AB,K/6 (Item 2 from file: 349)

DIALOG(R) File 349:PCT FULLTEXT

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01073265

APPARATUS FOR CUTTING FOOD PRODUCT

APPAREIL PERMETTANT DE COUPER UN PRODUIT ALIMENTAIRE

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Legal Representative:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 2003101686 A2-A3 20031211 (WO 03101686)

Application: WO 2003US17652 20030604 (PCT/WO US03017652)

Priority Application: US 2002385665 20020604; US 2003250113 20030604

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SC SD SE SG  
SK SL TJ TM TN TR TT TZ UA UG UZ VC VN YU ZA ZM ZW  
(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE  
SI SK TR  
(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG  
(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW  
(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 7805

English Abstract

An apparatus (10) for **cutting food** product so that the product is properly oriented and stabilized before and throughout the **cutting** operation to produce a **sliced** product of uniform thickness, even if the delivered **food** product varies in shape and size, such as when both round and elongate **potatoes** are used to produce **potato** chips. The apparatus (10) includes a **cutting** device (12) and housing thereabove that defines a passage (50, 32, 132) with an opening (44) in proximity to the **cutting** device (12), such that **food** product is delivered to the **cutting** device (12) in a substantially vertical direction. To improve the stability of round product during the **cutting** operation, the housing has an upper portion (40, 140) and a flared lower portion (42, 142) immediately below the upper portion (40, 140) so that at least a portion of the opening (44) of the passage is defined by the flared region (56, 156) and has a larger radius of curvature than the upper portion (40, 140).

Fulltext Availability: Detailed Description

Detailed Description

... tapered flared region 56 or 156 acting to trap and center round **potatoes** against the **cutting** wheel 12, thereby reducing the incidence of tapered **slices** caused when the product rotates about an axis that is roughly parallel to the direction of the **cut** made by the **cutting** wheel 12. In the embodiment depicted in Figure 3, the tapered region 56 has a...  
...below the wall 48 or 148 of the upper portion 40 or 140 opposite the **water jets** 52 and 152. In such an embodiment, the portions of the openings 44 and...

18/3,AB,K/2 (Item 2 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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01096360

ASEPTIC PRODUCTION OF **MEAT**-BASED **FOODSTUFFS**

PRODUCTION ASEPTIQUE DE PRODUITS ALIMENTAIRES A BASE DE VIANDE

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200417741 A1 20040304 (WO 0417741)

Application: WO 2003GB3759 20030821 (PCT/WO GB03003759)

Priority Application: GB 200219498 20020821

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NI NO NZ OM PG PH PL PT RO RU SC SD  
SE SG SK SL SY TJ TM TN TR TT TZ UA UG US UZ VC VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LU MC NL PT RO SE  
SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 7327

English Abstract

**Meat** is processed under conditions preserving its quality and hygiene.

Process steps, particularly those in which new **meat** surfaces are generated, are carried out in an atmosphere comprising CO<sub>2</sub> and excluding O<sub>2</sub>. UV may be used for germicidal action. The **meat** temperature is preferably kept between 0 and -2(deg)C. Particularly for red **meats**, the CO<sub>2</sub> content is controlled to maintain a surface pH of 3.5 or less.

Fulltext Availability: Claims

Claim

... However such energies permeate deep into the **foodstuff** and as such are unnecessary for raw **meat** and similar compounds which only suffer from surface contamination. Such energies also generate large amounts of heat, a component that all raw **meat** operations need to avoid or minimize to **permeate** product denaturation. Actinic reactions primarily occur in...  
...**water** activities and low acidic pH. Examples of **foods** of this type are winter pineapple, **fruit** juices and milk. While fresh **meat** under normal atmospheric conditions has a aW of up to 0.99, frozen **meat** or **meat** with a dried surface have much lower aW. Also the pH of raw beef is usually in the range pH5 6.0 with other **meats** showing a similar range. As such it is possible to use other methods to reduce...  
...the product and prevent 10 or minimize the formation of breakdown products that would affect **meat** quality and keeping quality attributes. Thus the primary source of loss of **meat** quality and keeping quality is oxygen and by-products generated by oxidative reactions. Controlled atmosphere...  
...also details the alleged advantages of low oxygen or no oxygen gas mixtures for preserving **meat** quality attributes. However the typical volumes of gases found in such packages exert there preserving...  
...any substantive  
...decontamination effect nor by significantly modifying any of the physical properties of the **meat**.  
Therefore a need exists to better control the **meat** processing environment and the materials being processed



within it so as to more effectively reduce...

...sources of cross contamination and recontamination within that environment and simultaneously maintain or improve the **meat** quality and keeping quality attributes of the products processed and produced within that system...

...of the following:

- (i) to reduce or obviate the drawbacks of using decontamination methods for **meat** which may rely entirely or in part, on **chemical** methods;
- (ii) to reduce or obviate the limitations of decontamination methods for **meat** which principally rely on adding powders, **water**, solutions or other liquids to raw **meat** and its subsequent products such that either the volume of **water** added may either exceed the natural proportions normally found in raw **meat** and its products and/or may require labelling of the fact, accordingly;
- (iii) to provide...

...can enhance the decontamination capabilities of the system by changing the physical properties of the **meat** to make the surfaces of both the raw **foodstuff** materials, their intermediate and finished products...

...to the decontamination treatment and as a consequence enhance the keeping qualities of the raw **meat** and its products so formed. These objects can be provided by pre-grinding (if necessary) the **meat** to a substantially uniform size and exposing the freshly ground **meat** particle surfaces to a sufficient quantity of carbon dioxide gas such that the pH at the surface of the **meat** is reduced to pH 3.5 or less and a suitable narrow wavelength, germicidal UV...

...a gas which becomes active on contacting the carbon dioxide enriched surface of the ground **meat** ;

- (iv) to minimize sources of recontamination and cross contamination within the processing environment generated or...

...occur, or a combination of both;

- (v) a method which utilizes mechanical or physical or **chemical** actions within the processing operation to keep the processing equipment as physically clean and debris...

...or the rate of oxidation reaction occurring within the product and thus maintain the highest **meat** quality attributes or even enhance the **meat** quality.

A preferred type of embodiment is a method which pre"ferably undertakes, all material...

...ensure it substantially remains in the range -20C to 00C without causing freezing of the **meat** or **foodstuff** or if processing operations cause deviation from the desired range, it returns, through...

...if possible organic, **foods** and an increasing regulatory requirement for reduction or elimination of artificial **chemicals** and preservatives in such **foods**, particularly **meat** and **meat** products, it is alarming to note that many proposed methods for decontaminating **meat** and other **foodstuffs** rely on the addition of **chemicals** not normally found in or on such **foodstuffs** or by irradiating such **foodstuffs** with ionising radiation.

In accordance with one aspect of this invention, it has been found that exposing **meat** surfaces to an introduced atmosphere predominantly of gaseous Carbon Dioxide during all practical stages of...

...has resulted in a significant reduction in the total numbers of viable microorganisms compared with **meat** not so treated. For the purpose of definition, the Carbon Dioxide atmosphere means a.n...

...that the effect is still further enhanced when the temperature of the surface of the **meat** is kept substantially at OOC or below but not lower than -2'C such that...

...gas in any liquid or other carrier prior to or during any contact step.

Many **chemical** methods which rely on, if not entirely, at least in part, the lowering of pH...

...liquids not only to provide suitable dilutions thus preventing the introduction of deleterious physical and **chemical** properties to the **foodstuff** being treated, but also to effect an even distribution around the...

...further aspect of this invention it has been found that with the surfaces of the **meat** , **meat** product or other **foodstuff** substantially exposed to the Carbon Dioxide atmosphere, the addition of other...

...or germicidal UV alone.

These specific conditions produce a very substantial microbiocidal reduction in both **pathogenic** bacteria and total viable counts for a very wide variety of **foodstuffs**. However, very occasionally...

...when the **foodstuff** has a very heavy total microbial load or contains some very specific **pathogens** , a more extensive decontamination treatment has been necessary to ensure a satisfactory reduction for processing...

...equipment components as necessary.

This may be in the form of scrapers, brushes, air **jets**, **water jets** or similar actions where the surface to be cleaned has occasion to be presented to...

...used in a sausage or product formulation or a changed physical state for example lean **meat** in a substantially frozen or tempered state. These may be within a substantially continuous processing...

...22 are substantially deleterious to a number of attributes related to product quality. For example, **meat** in the presence of air or oxygen will irreversibly change colour from an initially attractive...

...absence of of air or oxygen. However, the attractive Oxymyoglobin is easily reformed when the **meat** is re-exposed to air in a controlled manner, for example, within a modified atmosphere...

...the absence of air or oxygen is the minimising or elimination of deleterious **biochemical** and **chemical** reactions within the **foodstuffs** which result in a reduced keeping quality of the **foodstuff**, an...

...a decontaminating effect on its own, they do not allow the immediate surface of the **meat** or other **foodstuffs** to become sufficiently low in pH to enable the synergistic microbial reduction...

...Light or more particularly reactions such as photo-oxidation or photo-degradation which reduce overall **meat** or **food** quality are initiated, amplified and/or accelerated by the presence of natural light...

...that the effect is still further enhanced when the temperature of the surface of the **meat** or other **foodstuff** is kept substantially at OOC or below but not lower than -20C...

...Embodiments

Example 1:  
Production of Formed and Filled Chicken Patties using Frozen and/or Chilled **Meat**  
The apparatus is shown, highly schematically, in Fig 1.  
Frozen chicken **meat** of 3 different types, breast **meat** with less than 5% fat; breast trim with less than 15% fat and chicken skin...

...reference to an internal supplier database detailing specific supplier composition performance.  
The blocks of chicken **meat** 10 are removed from their boxes and weighed (at a weighing station 12). optionally if...

...frozen or tempered blocks rises evenly to a temperature above freezing such that all the **meat** is thawed. Preferably the final equilibrated temperature should be between -2'C and 0'C...

...the energy source 22 is preferably microwave or Rf.  
When available, use of fresh chilled **meat** in place of frozen and thawed **meat**, is-a preferred option. This **meat** should also enter into the processing system between -20C and 0'C.  
If cooling is...

...one or more of the preferred embodiments previously described.  
It is well known that trim **meat** has a much higher content and occurrence of bone and bone fragments than whole muscle and for safety reasons it is preferable to pass the **meat** through a detection and removal system 24 so that all such bone can be automatically detected and removed from the **meat** prior to processing. This can be achieved by a number of 27 different methods but...

...reduce the size of the material at this time as the thawed trim and breast **meat** is of a size suitable for passage through the detection system. However if larger material is used, for example whole muscle turkey **meat**, provision is made to reduce the **meat** size to that of 7.5cm or less by passage through a conventional **meat** pre-grinder or any other suitable method. However the larger the pieces of **meat** and the less the cutting of the material, the better the level of detection as...

...Such a method also allows for the detection and rejection of other contaminants in the **meat** and their immediate rejection.  
It may also be necessary to fine tune the product formulation...

...batch techniques can be used.  
Moisture measurements are similarly be undertaken simultaneously within the constrained **meat** flow by various established methodologies such as electrical conductance or Infra Red reflectance. This can be directly in the flow of the **meat** anywhere along its constrained flow or preferably

as it passes into or out of the...  
...can be used. 28  
With two such measurements, in a material such as boneless chicken **meat** and in the absence of any additional components, protein can be determined by difference, i...  
...total fat and total moisture content together and deducting that from the total weight of **meat** analysed. Once the **meat** has been measured and providing it is within the acceptable temperature range, it now enters the aseptic, or essentially aseptic, part of the system 26. The **meat** is passed through a grinder 28 where it is reduced to its final desired particle...  
...with one or more further product **streams** 32) or into intermediate storage containers.  
As the **meat** passes to these containers or the blender (or earlier if already of acceptable particle size...  
...wavelength UV-C light around most or all of its surface such that all the **meat** passing along it is exposed to the UV-C light, the duration of which is...  
...a reduction of total microbial organisms and an elimination of all microorganisms considered to be **pathogenic**, for example, E.coli, Salmonella, Listeria and Campylobacter. However the sources 34 of UV-C...  
...by exposing the particles to acidification, i.e. lowering the pH normally found in such **meat**, i.e. 5.5 - 5  
The use of **water** or other solutions is undesirable as...  
...environment because of the inherent danger they pose to humans and the undesirable physical or **chemical** effects they cause to the **meat** itself. A practical and suitable alternative is Carbon Dioxide.  
Excess of the gas is exposed to the **meat** immediately prior to, during and immediately after exposure to the UV-C. The amount of...  
...before and after the UV-C treatment may be such that it commences before the **meat** enters the measurement system and continues to some suitable point in the operation after holding...

18/3,AB,K/3 (Item 3 from file: 349)  
DIALOG(R) File 349:PCT FULLTEXT  
(c) 2004 WIPO/Univentio. All rts. reserv.  
00812587  
HIGH **PRESSURE** CLEANING SYSTEM  
DISPOSITIF ET PROCEDE DE NETTOYAGE AMELIORE  
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(Residence), AU (Nationality), (For all designated states except: US)  
Patent Applicant/Inventor:  
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Legal Representative:  
COWLE Anthony John (et al) (agent), Davies Collison Cave, Level 10, 10  
Barrack Street, Sydney, NSW 2000, AU,  
Patent and Priority Information (Country, Number, Date):  
Patent: WO 200145854 A1 20010628 (WO 0145854)  
Application: WO 2000AU1602 20001221 (PCT/WO AU0001602)  
Priority Application: AU 994777 19991221  
Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CR CU CZ DE DK DM DZ EE  
ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT  
LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM  
TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: English

Filing Language: English

Fulltext Word Count: 2630

English Abstract

A cleaning apparatus (91) for cleaning substance surfaces such as concrete, tiles, pavers, etc. The cleaning apparatus has an enclosed head (2) which is substantially concave in shape, and, an inlet hose (3) connected to the head to supply a high **pressure** liquid **jet**. The hose is preferably connected by a universal joint (4) to enable three-dimensional movement. The supply of the liquid **jet** cleaning fluid is regulated by a hydraulic circuit and is preferably powered by an automobile engine, for transportability.

Fulltext Availability: Claims

Claim

... discoloured for a variety of reasons, for example, due to spills or oil and other **chemicals**, due to the growth of moss and mould, and due to general usage and environmental...  
...surfaces are cleaned. The first is by applying a cleaning agent, such as an abrasive **chemical** or acid, and scrubbing the surface with the aid of a brush or like implement...

...a wand-like tool. The tool is moved from side to side such that the high **pressure stream** is transversed over the entire surface in a systematic manner. Whilst it is appreciated that...surfaces, typically used on driveways, paths and patio areas, for removal of dirt, oil and **chemical** spills, moss and mould, etc.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will become...

...cleaning function, if desired. Furthermore, the liquid **jet** may be **water**, and/or may include **chemical additives** such as cleaning agents, and / or may be heated. It will be appreciated that the...grime from the pavement and similar surfaces. This avoids the need to use harmful caustic **chemicals**. The problem with many prior high **pressure** systems is that they damage aged concrete and...

...floor surfaces for sealers to be applied

0 Airport Hangars and Runways

Food Processing Plants

Fruit Juice and Drink Factories

\* Breweries

Flour Mills

All such variations and modifications should be considered...

21/3,AB,K/1 (Item 1 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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00659585

Robot **cutting** system

Robotersystem fur Schneidevorrichtung  
Systeme pour manipuler un dispositif de coupe  
PATENT ASSIGNEE:

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DE;DK;ES;FR;GB;GR;IT;NL;PT;SE)

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PATENT (CC, No, Kind, Date): EP 634246 A1 950118 (Basic)  
EP 634246 B1 981216

APPLICATION (CC, No, Date): EP 94109423 940617;

PRIORITY (CC, No, Date): US 90815 930713

DESIGNATED STATES: DE; DK; ES; FR; GB; GR; IT; NL; PT; SE

INTERNATIONAL PATENT CLASS: B23Q-001/00; B26F-003/00

ABSTRACT EP 634246 A1

A computer-controlled robot **cutting** system for making angled or beveled **cuts** along a preselected path in a workpiece having a generally planar **cutting** surface. A **cutting** knife, such as a high-intensity fluid **jet**, is pivotably mounted in a support frame having two pairs of arcuate guides disposed at right angles to each other for motor-driven rotation of the **cutting** knife about orthogonal axes. The centers of curvature of both guides lie on a critical plane containing a pivot point about which the **cutting** knife pivots. An opposing workpiece gantry with horizontal and vertical slides for motor-driven translation of the workpiece along two axes also includes means for holding the workpiece such that its surface to be **cut** faces the **cutting** knife and lies in the critical plane. The workpiece is thus translated to define the **cutting** path on the obverse surface, while the **cutting** knife is pivoted to define the entry angle of the **cut** along the **cutting** path. Four motion controllers under computer control coordinate the motors driving each axis of rotation or translation. Because the obverse **cutting** surface of the workpiece is maintained in the critical plane containing the pivot point, pivoting of the knife does not change its entry point in the **cutting** surface, thereby simplifying motion control algorithms. Furthermore, because the **cutting** knife is pivoted and the workpiece is translated, the relatively massive gearing and movable frame structures are distributed between the **cutting** knife section and the workpiece gantry, lowering the inertia and enabling the use of lighter-duty motors. (see image in original document)

ABSTRACT WORD COUNT: 260

LANGUAGE (Publication,Procedural,Application): English; English; English

## FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS B	(English)	9851	717
CLAIMS B	(German)	9851	680
CLAIMS B	(French)	9851	903
SPEC B	(English)	9851	5936
Total word count - document A			0
Total word count - document B			8236

Total word count - documents A + B 8236

...SPECIFICATION **cutting**.

In the field of tuna fish processing, for example, the completely or partly automated **cutting** of frozen slabs of tuna to remove blood **meat** and skin portions from edible loin **meat** portions is described in three U.S. patents (3,800,363; 4,738,004; and...

...to James M. Lapeyre and assigned to the assignee of this application.

Besides discussing the **cutting** of tuna slabs along irregular paths, the patents also describe scanners for producing images of...

...or both sides of the slabs from which control signals are generated to control the **cutting** apparatus. The two older patents US-A 3,800,363 and US-A 4,738,004 (preamble of claim 1) discuss general methods of visioning and **cutting** tuna slabs with few details of the conversion of the electrical signals representing the **cutting** path as determined by the video scan into control signals for the **cutting** apparatus. Reissued patent Re. 33,917 shows a **water jet** robot relatively movable with respect to the stationary slab to be **cut**. None of the patents addresses the problem of achieving fast and accurate **cutting** paths.

The **water jet** nozzle on the **water jet** robot shown in Re. 33,917...

21/3,AB,K/2 (Item 1 from file: 349)

DIALOG(R)File 349:PCT FULLTEXT

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01017801

MACHINE FOR **CUTTING VEGETABLES** INTO PIECES

MACHINE DESTINEE A COUPER DES LEGUMES EN MORCEAUX

MAQUINA PARA TROCEAR HORTALIZAS

Patent Applicant/Assignee:

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Patent and Priority Information (Country, Number, Date):

Patent: WO 200347371 A1 20030612 (WO 0347371)

Application: WO 2002ES576 20021204 (PCT/WO ES0200576)

Priority Application: ES 20012716 20011205

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR  
LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ OM PH PL PT RO RU SD SE SG SK  
SL TJ TM TN TR TT TZ UA UG US UZ VN YU ZA ZM ZW

(EP) AT BE BG CH CY CZ DE DK EE ES FI FR GB GR IE IT LU MC NL PT SE SI SK TR

(OA) BF BJ CF CG CI CM GA GN GQ GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZM ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Publication Language: Spanish

Filing Language: Spanish

Fulltext Word Count: 3470

English Abstract

The invention relates to a machine for **cutting vegetables** into

pieces. The inventive machine comprises a conveyor (1) for transporting the products that are to be cut into pieces which consists of V-shaped conveyor meshes (6), defining independent, parallel longitudinal paths, and which passes through a cutting zone. The aforementioned cutting zone is provided with an operating assembly (2) comprising pressurised water jet -type cutting heads (10) which correspond to the longitudinal transport paths. Said cutting heads are disposed so as to be adjustable in terms of height and oblique or perpendicular transverse orientation in relation to the conveyor meshes (6).

International Patent Class: B26F-003/00



File 348:EUROPEAN PATENTS 1978-2004/Oct W04

File 349:PCT FULLTEXT 1979-2002/UB=20041028,UT=20041021

Set	Items	Description
S1	8807	<b>WATERJET?</b> OR (WATER OR LIQUID) ( )JET? ? OR HIGH ( )PRESSURE ( ) - STREAM? ?
S2	75070	(E OR ESCHERICHIA) ( )COLI OR STAPHYLOCOCC? OR STREPTOCOCC? - OR COLIFORM? OR SALMONELLA OR LISTERIA OR CAMPYLOBACTER OR PH- YTOPATHOGEN?
S3	162785	DISEASE? ?
S4	107224	VIRUS?? OR MICROBE? ? OR MICROBIAL
S5	28273	POTATO?
S6	72636	VEGETABLE? OR FRUIT OR FRUITS
S7	18449	MEAT OR MEATS
S8	99007	FOOD
S9	116996	LICING OR SPLIT????
S10	388501	CUT OR CUTS OR CUTTER? ? OR CUTTING OR SLICE? ? OR SLICING
S11	52	S1(S)S2:S4
S12	14	<b>S11(S)S5:S10 [2 duplicates; 12 not relevant]</b>

File 350:Derwent WPIX 1963-2004/UD,UM &UP=200470

File 347:JAPIO Nov 1976-2004/Jun(Updated 041004)

Set	Items	Description
S1	16622	<b>WATERJET?</b> OR (WATER OR LIQUID) ( )JET? ? OR HIGH ( )PRESSURE ( ) - STREAM? ?
S2	39262	(E OR ESCHERICHIA) ( )COLI OR STAPHYLOCOCC? OR STREPTOCOCC? - OR COLIFORM? OR SALMONELLA OR LISTERIA OR CAMPYLOBACTER OR PH- YTOPATHOGEN?
S3	151689	DISEASE? ?
S4	84206	VIRUS?? OR MICROBE? ? OR MICROBIAL
S5	19034	POTATO?
S6	116202	VEGETABLE? OR FRUIT OR FRUITS
S7	43732	MEAT OR MEATS
S8	316212	FOOD
S9	137157	LICING OR SPLIT????
S10	976144	CUT OR CUTS OR CUTTER? ? OR CUTTING OR SLICE? ? OR SLICING
S11	16	S1(S)S2:S4
S12	5	<b>S11(S)S5:S10 [not relevant]</b>
S13	11	<b>S11 NOT S12</b>
S14	12	<b>(S1 AND S2:S4 AND S5:S10) NOT S11</b>

13/26,TI/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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012704905

WPI Acc No: 1999-511014/199943

Microbe elimination method - useful for vacuum chiller

13/26,TI/9 (Item 1 from file: 347)

DIALOG(R)File 347:JAPIO

(c) 2004 JPO & JAPIO. All rts. reserv.

07904221

SEPARATION METHOD, SEPARATION APPARATUS, CLEANING METHOD USING THEM AND  
CLEANING APPARATUS THEREFOR

14/26,TI/5 (Item 5 from file: 350)

DIALOG(R)File 350:Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.  
014030296

WPI Acc No: 2001-514510/200156

New pyrrolecaboxamide and pyrrolethioamide derivatives useful for  
protecting plants against phytopathogenic fungi, bacteria and viruses

14/26, TI/6 (Item 6 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.  
013973191

WPI Acc No: 2001-457404/200149

New trifluoromethylpyrrole carboxamide derivatives used for controlling  
microorganisms and preventing infestation of plants, active against  
fungi, bacteria and viruses

14/26, TI/10 (Item 10 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.  
007161475

WPI Acc No: 1987-158484/198723

Fresh celery processing to extend shelf life - by packaging cooled  
sections of selected petioles in sealed container

14/26, TI/12 (Item 12 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.  
002068350

WPI Acc No: 1978-81421A/197845

Dressing for warp lubrication on water jet loom - obtd. by adding  
antiseptic-fungicide and chelate-forming cpd. to dressing oil

14/7, K/11 (Item 11 from file: 350)

DIALOG(R) File 350: Derwent WPIX

(c) 2004 Thomson Derwent. All rts. reserv.  
007144561

WPI Acc No: 1987-144558/198721

Slicing **fruits** and vegetables - using high pressure fluid jet  
Patent Assignee: DNA PLANT TECHN (DNAP-N)

Inventor: ORR A; SPINGLER J O

Number of Countries: 015 Number of Patents: 003

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 223111	A	19870527	EP 86114896	A	19861027	198721 B
US 4751094	A	19880614	US 85792439	A	19851029	198826
CA 1274752	A	19901002				199045

Priority Applications (No Type Date): US 85792439 A 19851029

Cited Patents: EP 39958; FR 2433453; US 2018926; US 2437637; US 3351113; US  
3704966; US 3811795; US 4145681; US 4496515

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
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EP 223111	A	E	12		
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Designated States (Regional): AT BE CH DE ES FR GB GR IT LI LU NL SE

US 4751094	A	4			
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Abstract (Basic): EP 223111 A

Method comprises using a **water jet** discharging from an orifice  
at 30,000-50,000 psi pressure to **cut** a fresh **fruit or vegetable**

so as to minimise bruising throughout the **cut** pieces and tissue damage at the **cut** surfaces.

USE/ADVANTAGE - The **cutting method** is partic. useful for **vegetables** such as carrots (claimed), celery (claimed), cucumber, green pepper, lettuce, cabbage, **potatoes**, turnips, rutabaga, string beans, radishes, rhubarb and swiss chard, and **fruits** such as oranges, grapefruit, lemons, limes, apples, pears, pineapples, cantaloupes, honeydew melons and water melons. Tissue damage due to compression and tearing is minimised. The shelf life of the **cut fruit or vegetables** is prolonged. **Microbial** and enzymatic damage is slowed down due to the formation at the **cut** surfaces of a very thin dry layer.

0/0

Abstract (Equivalent): US 4751094 A

Improved method of **cutting a fresh fruit and vegetable** comprises contacting with a **water jet** discharged from an orifice at 30,000-50,000 psi to **cut fruit or vegetable** into pieces, such that bruising and damage to tissue near the **cut** surface is minimised throughout. Pref. **water jet** discharges from orifice of dia. 0.003-0.012 ins.

USE - To cut carrots or celery, or other fresh root **vegetables**, leafy **vegetables**, or those having firm tissue. **Fruits** (e.g. oranges, grapefruits, lemon, etc) can be similarly treated. (4pp)

Derwent Class: D13; P62

International Patent Class (Additional): A23L-001/21; B26F-003/00